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ABSTRACT

This 11th edition of the High/Scope Buyer's Guide to Children's Software was designed to help teachers, caregivers, and parents make good choices when purchasing software to enhance children's learning. The book consists of an introduction, a chapter on finding the best software, software reviews for 48 different software products. The introduction discusses changes in the new edition. The first chapter contains software purchasing tips, including criteria for selecting high-quality software for home, center, or school to use with children from the pre-kindergarten through grade 4 levels. The section of software reviews features 48 programs. The entries for each program include a sidebar which contains numerical ratings on content strength (e.g., educational content and activities appropriate to the age level suggested); user friendliness (e.g., icons and picture menus used); management and options (e.g., customization to an individual child, group, etc.); strength of support materials (e.g., information provided to extend learning activities); and value for the cost (price compares favorably with other programs); and a profile of the program, including publisher, intended grade or age level, learning content area (e.g., language, social studies, country); hardware and software needed, and cost. A detailed narrative description of the program makes up the bulk of each entry. "See also" references to other software products are included at the end of many entries. Four appendices include descriptions and ratings for previously reviewed software, a listing of software publishers, a listing of software programs by concept area, and a glossary. An extensive index of software titles is included. (DR)

HIGH/SCOPE'S SOFTWARE AWARD-WINNERS!

For Parents and Teachers

High/Scope Buyer's Guide to Children's Software

11th EDITION

Charles Hohmann Barbara Carmody Chica McCabe-Branz

SOFTWARE THAT WORKS ON YOUR COMPUTER!

OVER 500 TITLES REVIEWED!

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Charles Hohmann Barbara Carmody Chica McCabe-Branz

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Sunburst Communications, Inc.: Muppet Learning Keys
Tandy, Inc.: Radio Shack TRS-80 Models
Unicorn Engineering Inc.: Unicorn Smart Keyboard
Walt Disney Software, Inc.: The Sound Source

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Introduction

NEW EDITION CONTAINS MANY CHANGES

Welcome to the eleventh edition of the *High/Scope Buyer's Guide to Children's Software*. This guide was designed to help you make the best choices when purchasing software to enhance children's learning. The evaluation process that formed the basis for this book measured all major software-quality issues—from user-friendliness and educational content to technical features—but its prime directive was to judge the software's value as an educational resource for children, parents, and teachers. This guide will save you time and money by helping you avoid buying software that is inappropriate to the children, the learning situation, the support staff, and other elements of the learning process.

Beginning with this edition, the *Buyer's Guide* contains in-depth reviews of selected software programs for children as well as the ratings and other information found in earlier editions. These new reviews are designed to help you decide whether a software title offers the concepts and skills you want and meets your curriculum goals and the needs of your children. The reviews also cover technical features so you can be sure the program provides the kinds of options, management, and support features you want. As a nonprofit educational research foundation that receives no monetary consideration from any business for reviewing their software, High/Scope is uniquely qualified to conduct these reviews.

INFORMATION ON EARLIER SOFTWARE

Appendix 1 contains reviews and descriptive information on software titles presented in previous editions of the *Buyer's Guide*. Appendix 2 contains a list of publishers that produce software for young children. Appendix 3 contains a list of software titles classified by content area. Appendix 4 contains a glossary of frequently used computer and software terms.

The new format of the *High/Scope Buyer's Guide* gives us more flexibility in the content of future editions since the reviews are more selective (we haven't attempted to include every software product). This format also enables us to focus on the educational benefits of individual software programs and the issues surrounding the delivery of these benefits in varied learning environments—home-, center-, or classroom-based settings. And this additional flexibility will help us better meet readers' needs in the rapidly evolving area of software-based learning.

WHY DOES HIGH/SCOPE REVIEW COMPUTER SOFTWARE?

Staff of the High/Scope Educational Research Foundation have been studying methods for supporting the learning and development of children since 1962. The Foundation first began exploring the use of

computers toward this end during the late 1970's; ever since, we have been integrating computer technology into our curriculum materials and teacher-training programs for educators from preschool through grade 4.

Today, visitors to virtually any High/Scope program can see children working with computers as commonly as they see them using such time-tested materials as building blocks, books, and art supplies. By publishing these software reviews, we hope to help parents, teachers, and other educators realize the benefits of computer-based learning technology.

1 Finding the Best Software

This chapter contains software purchasing tips, including criteria for selecting high-quality software for home, center, or school to use with children from the preK through grade 4 levels.

SOFTWARE PURCHASING TIPS

It's happened to thousands of us, whether we are teachers, parents, or media coordinators. After making a purchase, we eagerly open the colorful software package. But when we attempt to load the program into the computer, "INSUFFICIENT MEMORY ERROR" or some other alarming message flashes across the screen.

Make a Good Match

Due to the many varieties of computer hardware and operating systems, finding a match between software requirements and the capabilities of your system can be tricky and frustrating. The same complexities frustrate software publishers. Sally Carr Hannafin, former president of Weekly Reader Software, which published the Stickybear series and other software programs for young children, made a Halloween costume from the thousands of stickers attached to different computer programs to identify their multitudinous system requirements. Below are some tips to help you avoid common problems encountered when purchasing software.

1. Identify your computer's hardware specifications and operating system before ordering software. If you are a computer novice, find a knowledgeable friend or consult your computer dealer to be sure that the programs you select will run properly on your system. For easy reference, keep a copy of your computer's original advertisement of specifications. Hardware requirements are supplied with each program reviewed in this guide. Make sure you know the following about your computer system before ordering software:
   - **Amount of RAM** (random access memory). Programs vary in the amount of RAM required to run them.
   - **Amount of free RAM.** Your computer uses some RAM to start itself up, operate a mouse, and perform other routine functions. The remaining RAM is the "free RAM" available to run other applications, such as educational software.
   - **Type of monitor.** This is especially important for IBM and IBM-compatible computers. Crisp, colorful graphics are usually very important to children s software. Many programs have special display requirements.
   - **Type of printer,** if any.
   - **Type of sound card,** if any. Many programs now have the capability to produce speech, music, and sound effects.
   - **Type and version of operating system.** This includes the DOS or Windows version or Windows version for IBM compatibles, and the Finder version for Macintosh computers.
   - **Free hard disk space.** Not only do many programs require a hard disk drive (because they cannot be run from floppies), they may require 10 megabytes or more of hard disk space to hold digitized sound, graphics, and video clips.

- **Type of disk drives.** Software is usually delivered on disks. Determine whether you need 5.25- or 3.5-inch disks. Or, you may need a hard disk or CD-ROM drive.
- **Network capabilities.** If you'll be using the software on a network file server, determine the network operating system.

2. Once you have a title in mind, make sure it will work with your computer. To determine this, try the following steps:
   - **Study the software box.** Vendors usually list system requirements right on the package.
   - **If you have the slightest doubt, contact the software producer directly.** Describe your computer, and they will be able to tell you if the software matches. For a listing of software producers, see Appendix 2.

Get the Best Price

Below are some ways to buy your software for the lowest possible prices:

1. If purchasing multiple copies of a program, ask the publisher about a **lab pack** or **site license**. Lab packs provide multiple copies of software but usually come with only one copy of printed materials (such as a user's guide). Site licenses permit the loading of software onto a specific number of computers.
2. **Mail-order companies** often have the best prices; they purchase large amounts of software and pass some of the savings along to their customers. Advertisements for the larger mail-order companies can be found in popular computer magazines.
3. Many **discount computer stores** and **software outlets** offer popular educational software at discount prices.
4. Some publishers offer both **"school editions"** and **"consumer versions."** If you don't need the support materials that come with the school editions, consider purchasing a home or consumer version, which may be less expensive.

Quality Criteria

Software reviews and ratings are prepared by High/Scope staff as they work with children and adults in preschool through grade 4 settings. The reviewers have extensive experience in using computers in educational programs with these age ranges and are familiar both with the general educational practices and the computer technology issues that are applicable at these levels.

Reviewers use the structured review criteria documented in the table on the following page to develop ratings for each software program. In addition, final ratings are based on the independent scores of at least two reviewers.

Software Rating Criteria

CONTENT

- The program presents educational content and activities appropriate to the age level suggested.
- The child actively engages in decision making by creating, building, or manipulating content.
- Multiple levels of interaction and/or a variety of activities are available.
- The content builds sequentially from level to level and/or activity to activity.

USER FRIENDLINESS

- Icons and picture menus are used for navigation among program features and/or activities.
- The program provides open-ended (exploratory) and goal/task-oriented (e.g., Q & A) modes.
- The program allows a child to access help and/or move in and out of activities independently.
- The child is able to obtain feedback on accuracy, quality, and/or quantity of progress.
- The interface and program features respond quickly and precisely.

ADULT MANAGEMENT FEATURES

- Program features/activities (e.g., sound and music) can be customized to fit the needs of an individual child, group, or environment.
- The program maintains files of products, records, scores, and game status for multiple users.

STRENGTH OF SUPPORT MATERIALS

- Information is provided on educational value and developmental appropriateness of content and activities.
- Information is provided to extend learning activities to related off-computer learning experiences.

VALUE FOR THE COST

- Price compares favorably with other programs offering similar content, activities, and features.

In rating the software, High/Scope staff use a numerical score with values ranging from 1 to 5 for each of the above criteria. These ratings are combined and then converted to a percentage for an overall rating. If a program receives a high rating for each of the criteria, it is very likely that children will benefit from it and that both children and adults will enjoy using it.

High/Scope Eleventh Edition Award-Winners

- *DinoPark Tycoon* by MECC
- *Exploring Math With Manipulatives: Level I* by EduQuest
- *The Graph Club* by Tom Snyder Productions
- *Sammy's Science House* by Edmark
- *Thinkin' Things Collection I* by Edmark

ELEVENTH EDITION AWARD-WINNERS

High/Scope software award-winners are selected from the current crop of programs reviewed for the *Buyer's Guide*. No set number of awards is given, nor is there a set number of categories represented among the winners. Award-winners meet the following criteria:

1. Software with educational content appropriate for children at the preK through grade 4 levels.
2. High overall ratings according to High/Scope reviewing criteria, which include ease of use, strength of educational content, design, and other factors.
3. A unique or exemplary contribution to the needs of young learners, their teachers, and parents.

And now, the award-winners!

***DinoPark Tycoon*, MECC**

DinoPark Tycoon builds entrepreneurial and business skills in a theme-park simulation reminiscent of the popular novel and movie *Jurassic Park*. The game encourages extended play since the theme-park business depicted in the program evolves through many cycles of expansion, contraction, and day-to-day operation. Players need to know details about the business—for example, what various species of dinosaurs eat, the preferences of theme-park customers—in order to make good business decisions. The program provides many cross-curriculum learning activities involving planning, bookkeeping, science, and social understanding. (See review, p. 33.)

***Exploring Math With Manipulatives: Level I*, EduQuest**

Math software for early grades has had a tough time getting beyond numbers, counting, and basic arithmetic. *Exploring Math With Manipulatives* brings a full array of manipulative experiences to the computer. Computer experiences in such areas as working with shapes and fitting things together complement rather than replace work with real objects, providing built-in connections to writing about math and immediate feedback on numerical and spatial relationships. (See review, p. 35.)

***The Graph Club*, Tom Snyder Productions, Inc.**

Making graphs is a wonderful way for children of kindergarten age and older to gain practical, hands-on experience with numbers and such relationships as "more than," "less than," and "equal." Other graphing programs for young children have been developed (for example, "The

GraphMaker Tool" in IBM's *Exploring Measurement, Time, and Money: Level I*). But *The Graph Club* starts graphing where children do—with simple picture graphs—and builds from there. The Graph Club software guides children in the making of great-looking graphs and provides a whole curriculum of experiences in making and interpreting quantitative information. An outstanding tool for hands-on experiences in math and across the curriculum for K–3 children. (See review, p. 41.)

***Sammy's Science House*, Edmark Corp.**

Children's computer activities in science almost never get beyond telling about science facts—but *Sammy's* does! Activities involve valid science processes and problem solving at a level appropriate for kindergartners and even younger children! Several of the program's sequencing and categorizing problems have more than one possible solution, highlighting the real-life criterion for success: "correct" is what works. (See review, p. 75.)

***Thinkin' Things Collection 1*, Edmark Corp.**

In addition to music and logical thinking activities (two of each) that are excellent, *Thinkin' Things Collection* 1 creates a whole new experience—kinetic art. Rich in concepts and creative problems involving shape, motion, timing, and change, the "Flying Blocks" activity is like none we've seen before for young children and earns this program a place in the awards column. (See review, p. 86.)

— • —

This discussion of software award-winners concludes the introductory sections of this guide. We've explained our purpose in publishing this volume of reviews of software for children at the preK through grade 4 levels and discussed some of the considerations that determine price and the software's strengths and weaknesses. We're now ready to proceed to the software reviews themselves.

High/Scope Award-Winners in Previous Years

- *Color Me* by Mindscape, Inc. (1988, 1990)
- *Color 'n' Canvas* by Wings for Learning (1991)
- *Counting Critters* by MECC (1990)
- *Explore-a-Story* by D.C. Heath (1988)
- *Exploring Measurement, Time & Money* by IBM (1990)
- *Just Grandma and Me* by Broderbund Software (1993)
- *Kid Desk* by Edmark Corporation (1993)
- *Kid Pix* by Broderbund Software (1992, 1993)
- *KidsTime* by Great Wave Software (1990, 1991)
- *Kid Works* by Davidson and Associates (1992)
- *Kid Works 2* by Davidson and Associates, Inc. (1993)
- *Mask Parade* by Springboard (1988)
- *Math and Me* by Davidson and Associates, Inc. (1988)
- *Millie's Math House* by Edmark Corporation (1993)
- *Muppets on Stage* by Sunburst Communications, Inc. (1988)
- *Observation and Classification* by Hartley Courseware, Inc. (1988)
- *Picture Chompers* by MECC (1991)
- *The Playroom* by Broderbund Software (1990, 1991, 1992)
- *Reader Rabbit's Ready for Letters* by The Learning Company (1993)
- *Stone Soup* by William K. Bradford Publishing (1990, 1991)
- *Ted Bear Games* by Baudville (1991)
- *The Treehouse* by Broderbund Software (1992)

2 Software Reviews

The following are in-depth reviews of a selection of recently released software programs.

A to Zap

A to Zap is an alphabet book of open-ended activities exploring letters, letter names, words, numbers, counting, and other concepts for preK–1 children. It is sure to become a children's favorite, joining other programs such as Broderbund's *The Playroom* (reviewed on page 67) in providing a variety of enjoyable learning opportunities in an interactive environment. Each of the 26 activities is supported by creative sound effects capable of capturing the interest of adults as well as children. The program is set up so the mouse pointer moves across a letter or number block as the number or letter name is spoken. Unfortunately, it is impossible to reach several of the letters and numbers without crossing one or more of the other blocks. This creates a trail of partial sounds, which is a bit distracting.

For openers, the entire alphabet appears on the screen on alphabet blocks, and as each letter appears, it is announced. Click on any of the letters and its name and a word beginning with that letter is spoken; for example, click on *E* and the word *Elephant* is spoken. Next, the word is spelled, with each letter spoken as it appears. When the spelling is complete, a picture representing the word appears (for example, a vacuum sweeps for *V*). Here is where the fun really begins. Click on *G* for *Gone* and a black hole sucks the letters off a pyramid and then zaps them back on when reselected. *T*, *N*, *Y*, *H*, and *M* are power letters with activities introducing the child to additional learning concepts.

Once the *H* for *Hammer* is activated, a second hammer picture moves to the storage shelf located in the middle of the bottom of the screen. A child can hammer out the letters of a word included in the program by selecting the appropriate letters from the keyboard. When complete, the picture for that word appears on the storage shelf. A child can also hammer on the picture associated with a letter and move it directly to the storage shelf. The activity associated with that letter can then be accessed from the storage shelf as well as from the letter block. Older children can add personal spelling words by using the Preferences feature in the menu.

N is for *Number*. Ten blocks appear with the numbers 1 to 10 on them. As the child selects one of the blocks, a corresponding number of blank blocks zap onto the screen as the voice counts them aloud. Click on a block and the numeral label is applied. As each number is counted, a jack-in-the-box dog or elephant pops up from the block. When finished, a sound and visual explosion removes the numbers from the blocks so the child may continue the activity by selecting another number from the bottom of the screen. A query mode, selected by clicking on an exclamation point below the row of numbered blocks, allows for the random selection of a number to be counted.

T is for *Telephone*. With it, children dial important telephone numbers, such as 911 and the numbers of people important to their lives.

Ratings

Content Strength: **5**
User Friendliness: **4.7**
Management & Options: **4.9**
Support Materials: **5**
Value: **5**
Total: **97%**

- *Sunburst Communications, 1993*
- *Grades preK–1*
- *Language: letters, letter names, words, numbers, counting, telephone skills*
- *Windows (CD-ROM), Macintosh* (disk and CD-ROM)*
- *Windows version requires Windows 3.1, 4MB RAM, VGA color monitor (256 colors), CD-ROM drive, sound card.*
- *Macintosh version requires 2MB RAM (4MB with System 7.0), color monitor. CD-ROM version for Macintosh requires 4MB RAM, CD-ROM drive.*
- *$79 disk, $99 CD-ROM*

Y is for *Yummy*, a Concentration-like game in which the child matches upper- and lower-case letters hidden behind ice cream cones. *M* is for *Music*; selecting it allows for the exploration of four musical instruments.

The Preference option allows one to customize many of the activities in *A to Zap*. Letters can be set to all upper-case, all lower-case, or upper-case and lower-case; pronunciation of letters can be changed (for example, *Z* can be set to *zee* or *zed*); different types of speaking voices can be selected.

The user's manual includes a "Beyond the Basics" section, providing technical information for adding names, voices, and animation features. This informative manual follows Sunburst's tradition of supplying extensive technical and educational information. It points out features adults might miss (such as the more that 50 words that come with sound effects), provides hints for adults working with children in discovery-centered environments, and gives classroom teaching ideas and valuable technical information.

SEE ALSO:

The Playroom
Fun From A to Z
Zurk's Learning Safari

Annabel's Dream of Ancient Egypt

Annabel's Dream of Ancient Egypt makes it clear that CD-ROMs can be used to create unique learning environments. In this interactive story about a cat named Annabel, reading and vocabulary are the focus for kindergartners through third-graders. Annabel, unhappy with her sister's selfish behavior, dreams of ancient Egypt and Bastet, the cat queen, who later teaches Annabel the qualities of tolerance and understanding.

Older children will enjoy the extensive information and related activities about ancient and present-day Egypt. There is also information about the music and life of Giuseppe Verdi, whose opera *Aida* is set in Egypt and provides the musical background for the story.

Children may choose to hear Annabel's story narrated in a rich female voice with occasional accompaniment from *Aida*, or they may opt to read it themselves. Illustrations are in black and white until Annabel begins to dream, at which point rich colors transport the child to ancient Egypt. The interactive program is user-controlled, and children can highlight individual words or sentences to be reread.

Children can also control movement through the story by selecting picture icons; the clever Paws icon allows users to put the program in a pause mode. They can also save a place in the story with a bookmark, move backward or forward in the text, go to the glossary, or quit the program.

To reach the glossary, a child first pauses the story and then selects the glossary icon from the menu to the right of the text. The glossary alphabetically lists all words found in the story; the glossary must be scrolled to find the desired word. The glossary is beneficial only to older children who know how to alphabetize. When a glossary word is selected, it appears to the right of the scroll box along with a definition. The word is pronounced by the narrator but the definition must be read by the child. This interactive feature would be more beneficial for the young child if definitions were available by just clicking on words in the text and then having the option of hearing them read by the narrator.

Supplemental on-line activities include two coloring projects: one focusing on different types of cats and another, on scenes from life in ancient Egypt. A hieroglyphics activity, in which simple words typed by a child are translated into hieroglyphics, will appeal to children across grade levels. Two off-line activities involve children in making their own paper and in an archaeology dig involving the exploration of neighborhood trash.

Instructions for some of the supplemental materials and activities are recorded on the CD-ROM itself and can be printed from the

Ratings

Content Strength: **4.1**
User Friendliness: **4.5**
Management & Options: **3.5**
Support Materials: **4.5**
Value: **4**
Total: **84%**

- *Texas Caviar, Inc., 1991*
- *Grades K–3+*
- *Language, social studies*
- *Windows, Macintosh**
- *Windows version requires Windows 3.1, 4MB RAM, 256-color display, CD-ROM drive. Printer optional.*
- *Macintosh version requires System 6.0.5 or higher, color monitor, CD-ROM drive.*
- *$49*

program. Parental support materials may also be printed. The accompanying manual is only a few pages long and contains necessary setup, trouble-shooting and navigational information.

Children of varying ages will have opportunities to learn about the culture and history of ancient Egypt and aspects of present-day Egypt as they explore the diversity of information found in *Annabel's Dream of Ancient Egypt*. The interactive story CD-ROM is a powerful tool for involving young learners with extensive amounts of information. We look forward to seeing more CD-ROMs like *Annabel's Dream of Ancient Egypt* available to children.

The Backyard

The Backyard is third in a series of early childhood titles from Broderbund, which includes the award-winning *The Playroom* and *The Treehouse*. *The Backyard* is interactive, voice-supported, and intended for 3- to 6-year-old children, though we think a more appropriate range would be ages 5 to 7. In *The Backyard*, young children explore many of the real and imaginative aspects of playing in a backyard. The mapping, animal anatomy, and habitat activities are key strengths of this well-designed program, and make it suitable for home and school use. In addition, *Backyard's* games explore directional relationships and vocabulary associated with common facial expressions.

As in earlier titles by Broderbund, the scene designated by the title, in this case, a backyard, functions as the main menu. For fun, children can click on the musical paint buckets to color the planks in a fence. This creates a tune that can be played by clicking on Bopper Bird, who "bops" each plank to produce the notes of the song. This scene is also the source of other possibilities for fun: ants can be induced to crawl out of a crack in the patio in marching-band formation, a game of tic-tac-toe can be played with a friendly creature, the garden can be watered, or sky writing can be scrawled across the sky.

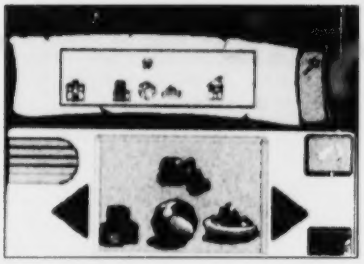
Directional skills and spatial relationships are the focus when a child navigates a steam shovel through the "Sandbox Treasure" activity to locate buried treasure. There are multiple levels of child-controlled play available in this activity, including one especially nice feature that allows a child to create a treasure map. One minor flaw, however, is that the house on the treasure map has a chimney but the one it represents in the sandbox does not.

One print- and three voice-supported activities introduce and expand a child's knowledge of animals, their anatomy, and habitats. Animal anatomy, identification, and habitats are explored in the "Animal Cookie" game as children sort and match body parts for two animals.

The "Animal Habitat Sticker Book" introduces children to the habitats of the animals from the "Animal Cookie" game. In story format, children are introduced to two of three habitats at a time (the habitats are Amazon Rain Forest, North American Desert, or Antarctica) and several animals who live in each area. The child is asked to move each animal to its home environment. If correctly placed, the animal will begin an animation sequence. If incorrectly placed, it will move back to the bottom of the screen, allowing the child to try again.

The "Knothole" game has children identify the body parts belonging to an animal while deciding how many moves on a game board are needed to reach a body part. One child may play against another child or against the computer.

The "Scarecrow" activity displays several facial expressions along with adjectives describing the emotions accompanying them. The



Ratings

Content Strength: **5**
User Friendliness: **4.7**
Management & Options: **3.5**
Support Materials: **4.1**
Value: **5**
Total: **91%**

- *Broderbund Software, 1993*
- *Grades K–2 (Ages 5-7)*
- *Mapping, spatial directions, animal habitats*
- *DOS, Windows, Macintosh**
- *DOS version requires DOS 3.1 or higher, 640K RAM, hard disk, VGA color monitor, sound card.*
- *Windows version additionally requires Windows 3.1, 4MB RAM.*
- *Macintosh version requires System 6.0.7 or higher, 2MB RAM for black and white, 3MB RAM for color, 9MB of hard disk space.*
- *$44.95*

"Pumpkin Patch" activity allows children to create pumpkin faces using a variety of fruit and vegetable pieces. Children may copy, flip, duplicate, and rotate fruit and vegetable pieces to create faces with Caterpillar tools. "Pumpkin Patch" faces can be printed.

Parents and teachers may customize some of the features in the program. An Options menu item prevents young children from accidentally straying into other areas of the hard drive. A Help menu is available for adults and explains games and the icons and tools available within each activity. *The Backyard* is compatible with several adaptive devices to enable physically challenged children to work with the program. *The Backyard* is a very appropriate companion to Broderbund's award-winning *The Playroom* program for young children. The program also includes a very thorough user's manual.

Bailey's Book House

Bailey's Book House is Edmark's early childhood and literacy complement to its award-winning's *Millie's Math House*. In *Bailey's Book House*, children explore alphabet letters and sounds, play with rhyming words, manipulate prepositions, construct stories using preset lists of characters, settings, props, and actions, and create and print their own cards and invitations.

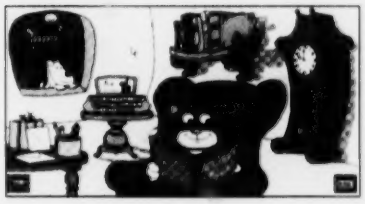
Each of the five activities creatively blends speech, music, and sound effects with practice in emergent literacy skills. Movement in and out of activities is easily accomplished and requires no reading. Thorough parent and teacher information is provided on-line and in the user's manual. All activities are open-ended, beginning with an explore-and-discover mode in which the child controls the direction and pace of interaction. A user-initiated query mode poses questions and problems pertaining to the content in the preposition, rhyme, and letter-learning activities. *Bailey's Book House* is recommended for inclusion in the 3–6-year age-range library, though the preposition and story-creating activities have many limitations.

As in many early childhood programs, voice capability is essential to *Bailey's Book House*. Lively children's voices, giggles, and music are heard as the main menu opens to Bailey's living room. Bailey is reading a book, and his eyes move back and forth as he reads.

The user-friendly interface allows children to enter one of five activities by clicking on a character or item in the living room. As soon as an activity has been selected, the computer identifies the choice in a child's voice. Whenever they want, users can move to another activity or option within an activity. Selecting the icon representing Bailey, displayed in the lower left-hand corner of each screen, returns the user to the main room. Clicking on the stop sign in the main room ends the program, and a notebook in the lower left-hand corner is used to access the adult section. The notebook icon can be turned off.

In one activity, Edmo the clown and Houdini, his dog, provide a context for exploring seven spatial prepositions—*in*, *out*, *over*, *behind*, *on*, *under*, and *off*—by directing each other to move to those positions in relationship to Houdini's doghouse. Learners click on one of the prepositions, which is then highlighted and spoken. Next, one character tells the other to perform the action. For example, Houdini might tell Edmo to "Go over the doghouse." After taking this position, Edmo would say, "I'm over the doghouse."

Clicking on the picture of Felix the flea starts the question-and-answer mode, in which children are asked to select a specific prepositional word from a list of three choices. (The same steps are followed for the question-and-answer modes in the "Letter Machine" and "Read-a-Rhyme" activities; the only difference is that the character in the picture frame changes.) In each activity, all words are read aloud and



Ratings

Content Strength: **4.3**
User Friendliness: **5**
Management & Options: **4.5**
Support Materials: **5**
Value: **4.5**
Total: **94%**

- *Edmark, 1993*
- *Grades preK–2*
- *Language, emergent literacy*
- *DOS, Windows, Macintosh**
- *DOS version requires 640K RAM, VGA monitor, hard disk, mouse, sound card.*
- *Windows version additionally requires Windows 3.1, 4MB RAM.*
- *Macintosh version requires 2MB for color, 4MB with System 7.*
- *Disk or CD-ROM versions available for Windows and Macintosh. CD-ROM versions require CD-ROM drive.*
- *$49.95*

highlighted when selected, thus providing both nonreaders and beginning readers with opportunities to interact. Clicking on the large dot at sentence beginnings rereads sentences in their entirety, and individual words may also be reread in any order, and as often as desired, by clicking on them.

The grandfather clock, complete with a swinging pendulum, opens "Read-a-Rhyme." Children may select any one of four words that rhyme with the ending word in a well-known nursery rhyme. The picture of Mother Goose starts the question-and-answer mode, during which children must select one of four words to complete a rhyme.

The "Letter Machine" activity investigates letters and sounds. Clicking on a letter or typing the letter from the keyboard produces a short sentence using words that begin with that letter. The choices are appealingly combined with voice, music, and animation. "Zebra's zip zippers" and "Quails quarrel" are two examples of statements that support both upper- and lower-case letters and letter-sound associations. Clicking on the picture of Millie, a giraffe, starts the question-and-answer mode.

Clicking on the shelf full of books allows users to create their own travel stories by selecting one of four characters, one of four means of transportation, one of four destinations, and one of three activities for the character to engage in upon reaching the destination. The individually constructed story can then be read back to the child in its entirety.

A table in the living room holds a wrapped present, envelopes, and writing utensils, which are used for the "Kid Cards" activity. Children can create greeting cards, invitations, thank-you notes, and gift cards. The printed messages (from a selection) can be read aloud for children to choose from, and any item can be decorated with colorful click-on stamps. These creations can be printed.

Adult section options, accessible only by secret code, allow parents and teachers to customize the program. Like *Millie's Math House*, the adult section provides extensive information on each of the activities, including a description, instructions for play, learning goals, and extension ideas for home and school. On-line information also includes installation requirements, a list of the words in the program, and a troubleshooting section. To facilitate use by young children and those with special needs, the program may also be run with a TouchWindow or a single switch.

SEE ALSO:

The Playroom
The Treehouse
Busytown
Bird's Eye View
Many Ways to Say I Love You

Big Book Maker: Letters, Numbers, & Shapes

Writing, sequencing, and text-picture relationships are all explored in *Big Book Maker: Letters, Numbers, & Shapes*. Queue produces several additional titles in the *Big Book Maker* series, all with essentially the same format. No specific age-range is given by the publisher, but using the program's print-only multilayered directions requires reading ability—and patience!

This program combines some elements of a word processor with clip-art imports to allow children to design single pages or entire books in four sizes, from Mini Book to Big, Big Book. Four sets of animals, 19 backgrounds, the letters *A–Z*, the numbers 0–9, three sets of props, two sets of shapes, six frames, and 11 fonts are available. A booklet of the clip-art selections is thoughtfully included with the program. In addition to features found in most word-processing programs, children may use speech boxes or bubbles of varying sizes, create shadow effects on the bubbles and boxes, and reverse the clip art.

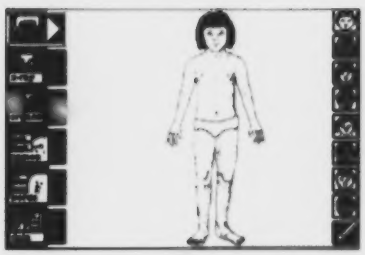
From the main menu, five choices are accessible: Start a new page, Load a previously saved page, Print in four different sizes, Open a utilities component for saving a page, and Quit the program. The mouse or arrow buttons are used throughout the program to make selections. Without picture icons to accompany menu choices, younger children and beginning readers can quickly become bogged down. The multilayered menu is complex. For example, to start a story, a child must first select Start a New Page, then Design My Page, then choose from View My Page, Backgrounds, Clip-Art, Write, Frames, and Edit. The program's exclusive use of written directions does not make this an appropriate choice for children under second grade. Unfortunately, even the accompanying manuals leave much to be desired, as they are sometimes inaccurate. Potential purchasers will have to consider whether the program's appealing book-creation features outweigh its limitations, especially for younger users.

Ratings

Content Strength: **3.3**
User Friendliness: **3.4**
Management & Options: **2.3**
Support Materials: **1.9**
Value: **3**
Total: **59%**

- *Queue, Inc., 1993*
- *Grades 2–3*
- *Language: writing*
- *DOS*, Macintosh, Apple II*
- *DOS version requires 512K RAM (640K recommended), color monitor (CGA, EGA, VGA, or MCGA), blank disks. Printer and mouse optional.*
- *$49.95*

Bodymapper



Ratings

Content Strength: **4.8**
User Friendliness: **4.8**
Management & Options: **4.9**
Support Materials: **4.8**
Value: **4**
Total: **95%**

- *Intellimation, 1992*
- *Grades 2–3+*
- *Science, math, writing*
- *Macintosh*
- *Requires System 6.0.5 or higher, 2MB RAM, hard disk, HyperCard 2.0 or higher, and the Helvetica type font (sizes 9, 12, 14, and 18). Program in black and white only.*
- *Printer optional.*
- $65

Bodymapper is an interactive HyperCard program that allows children to explore the systems and functions of the human body and to create charts and graphs of height, weight, and other body dimensions. Eight multicultural figures of children are the vehicles for this exploration. Modules for word processing, drawing, database construction, and graphing add open-ended elements to this well-designed program.

Navigation is mouse-controlled with single clicks, and all screens can be easily printed. On-screen directions require reading skills, so *Bodymapper* is not recommended for independent usage below second grade. However, teachers can easily incorporate *Bodymapper* into science, language, and graphing activities with kindergarten and first-grade children.

Bodymapper is divided into two main components: the reference component, which allows investigation of graphic and textual information, and the database component, which allows for the collection and listing or graphing of individual and group information.

All features of the program are accessible from the Main menu screen. On the left side of the screen are six large and clear picture and print icons, which can be used to move to the body, X-ray it, or present organ views. The rest of these icons enable children to view or add body part names, to read or add their own written material about particular body parts, and to access a database to view or enter statistical data. Body part size can be increased or returned to original size with simple point and click movements on a body part. Clicking on the edge of a picture moves the user on to the next sequence of pictures of the view selected.

Presented on the right side of the screen are eight illustrations of multicultural children's faces that permit users to change the faces' ethnicity and gender. There is also a Pencil button, which has several nice features. It will automatically draw a face and then ask the child to supply skin coloring and dimensions; it will draw the facial outline, then ask the child to supply heights, widths, and other facial details; or it offers the child the opportunity to create and finish the face from scratch.

The database holds individual records so children may enter statistical information about their own bodies. Teachers enter class members' names, and the program then provides each child with three work cards: My Body Sizes, My Looks, and All About Me. A Personal Data Sheet lets children record data about themselves; five sets of data on a child can be recorded and printed. Individual or group data can be displayed as line or bar graphs.

The teacher's guide, which is based on actual teaching experiences with the program, provides helpful ideas for using the program across curriculum subjects. It also contains teacher assessment and management ideas.

Teacher management options, suggestions for integration across curriculum subjects, and portfolio assessment suggestions are also included. Adult setting options, accessible only through a changeable password, allow users to select reading level and specify clothed or unclothed human figures, group or individual names, and American or metric measurement units.

Bodymapper's minimal hardware requirements make it easily accessible to classrooms. Its multicultural elements, applicability across curriculum and age levels, cooperative learning aspects, and user-friendliness are all good reasons to add *Bodymapper* to your classroom software collection.

Bravo! Books: A Beautiful Feast for a Big King Cat

Ratings

Content Strength: **3.9**
User Friendliness: **3.6**
Management & Options: **5**
Support Materials: **2**
Value: **4**
Total: **73%**

- *Computer Curriculum Corporation, 1993*
- *Grades K–1 (Other books are at other levels.)*
- *Language and literacy: reading*
- *Macintosh*
- *Requires Mac LC or above, System 6.0.7 or above, CD-ROM drive, 4MB RAM.*
- *$49.95*

The *Bravo! Books* series is Computer Curriculum Corporation's entry into the expanding selection of interactive books presented on CD-ROM. The series draws on Silver Burdett Ginn's wide range of well-written children's literature and Paramount's artistic and film resources.

The basic, time-tested act of reading or listening to a paper storybook provides the underlying structure for the new books-on-CD-ROM approach. Children can read the text and look at the pictures of *A Beautiful Feast for a Big King Cat*, or they can push the Story Teller button, which prompts the computer to read the story in a CD-quality voice as it "turns" each page, with musical bridges between pages. Story Teller functions like a slide-tape show that can be started, stopped, and restarted from the beginning; otherwise, it offers no interaction.

In addition to creating an easy-to-use software design (reflected in such features as picture menus and point-and-click navigation), the program's developers provide a glossary and personalized word lists; sentence, phrase, and word reading modes; individual student note files; and customization features. Taken together, these features draw children into the stories and help build their reading and comprehension skills.

In the Read Next mode, children can control story pace and interact with each page. Depending on child- or teacher-selected settings, each click of the Read Next button highlights either a sentence, phrase, or word, allowing one to select the best presentation for comprehension. Pressing the Move button animates an action sequence. Clicking a hot spot in the picture identifies particular objects in written and verbal format.

Pressing Notes pulls down a window that allows users to write or record spoken notes about the current page on disk. When an individual word is clicked, it is read aloud; when the more challenging words (already highlighted in the text) are clicked, definitions are presented. In Read Next mode, a slider allows the user to skip to any page, forward or backward. Narration capability can be turned off while still in the Read Next mode, which allows children to read to themselves while still enjoying the interactivity and on-line help.

The glossary is a built-in talking picture dictionary, one of the program's best features for enhancing children's reading vocabulary. Challenge words, which appear in highlighted form throughout the text, can be looked up just by clicking on them. The glossary also includes some video clips, although some of them seem to make sense only if you already know the word's meaning.

The personalized word lists offer even better ways for working with words. Each word clicked by a child is recorded on his or her own list. Because these lists can be printed by teachers, they can be used in spelling, writing, and dictionary exercises. Teachers can also print page notes and then use them for off-line activities.

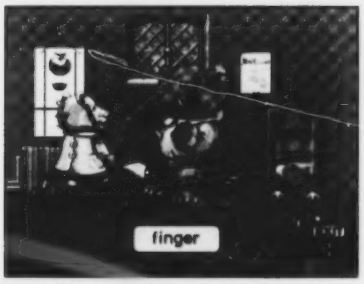
This CD-ROM comes with a print copy of the story book, which further encourages off-line activity. Unfortunately, the user manual is limited to an explanation of program features and lacks suggestions for on- and off-line activities.

This is an entertaining and useful program. The focus on a range of literacy skills comes through in the multiple reading modes and well-implemented teacher options.

SEE ALSO:

The Tale of Peter Rabbit and other titles by Discis Books
The Tortoise and the Hare and other titles in the Broderbund *Living Books* series

Busytown



Ratings

Content Strength: **4.6**
User Friendliness: **4**
Management & Options: **4**
Support Materials: **5**
Value: **4.5**
Total: **87%**

- *Computer Curriculum Corporation, 1993*
- *Grades preK–1*
- *Letters, numbers, counting, shapes, spatial directions, body parts*
- *DOS*, Windows, Macintosh*
- *DOS version requires 640K RAM, VGA color monitor, hard disk, sound card.*
- *Windows version additionally requires Windows 3.1, 4MB RAM.*
- *Macintosh version requires LC model or above, 4MB RAM, System 6.0.7 or above, color monitor.*
- *Disk or CD-ROM versions available for Windows and Macintosh. CD-ROM versions require CD-ROM drive.*
- $59.95

Busytown uses many well-known Richard Scarry characters, led by Lowly Worm, to accompany children into 12 interactive scenes, each with its own learning activities. Adult options allow the activated scenes to be limited to as few as 4. The exciting sounds and animation of multimedia entertain children as they learn to identify body parts, numbers, letters, shapes, and directions.

From the opening menu screen, Lowly Worm's mouse-controlled Applecopter takes children from one playground to another. Blinking stars serve as a gentle hint, indicating where the mouse should be clicked next. Children can open and close any of the playgrounds whenever they wish; they can also stay in a playground as long as they wish.

Spatial relationships are accurately represented in the playgrounds' detailed graphic designs. For instance, when a child chooses to enter "Mr. Fixit's Workshop," "Bruno's Deli" is visible through Mr. Fixit's window. But the artistic detail comes at a price. Many screens are busy and a little confusing, especially when the user is moving complex cursor objects (e.g., the Applecopter) to intended hot spots. *Busytown* gets high marks for modeling good interpersonal etiquette—its action figures use language like "May I help you?" "Please . . . ," and "Thank you."

Among the playgrounds are "Seesaw," in which children can compare and combine numbers between 1 and 5; "Wind," which lets children explore the effects of wind on two outdoor scenes; and "Storytime," which gives children an opportunity to read or listen to a story.

The "Banana Gorilla" and "Delivery Truck" scenes involve children with directions, for example, as they maneuver a gorilla through a maze to reach bananas or navigate a delivery truck through city streets. "Bruno's Deli" also involves learning about directions. Deli customers place food orders with Huckle Cat, and players must then move Huckle to the left or right to prepare orders. "Building a House" and "Captain Salty's Ship" offer valuable experiences with nongeometric shapes. Children match objects (for example, a bathtub) from house-building and ship-fitting scenes with silhouetted shapes. As items are raised by hook onto the ship, Captain Salty names and identifies the function of each item.

Spatial relationships are also the focus of "Dr. Diane's Hospital." Children locate body parts on Norbert the Elephant, who complains, with voice support, about a long, long list of "hurts." By clicking on the named body part, users can place bandages on Norbert's stomach, waist, and chest, and give him a shot in the shoulder.

There were a few flaws in this part of the program. Norbert is treated through his clothes. It would have been more realistic without clothes. Also, when the blinking star indicates the bandage is to go on the left foot, selecting the right foot produces the response "That isn't my

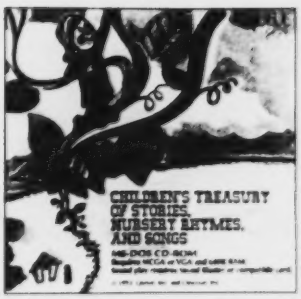
foot." This could confuse the user. It would be better if the response was something like "That isn't the foot that hurts."

In "Gas Station," children help Huckle and Lowly pump the requested number of gallons. In "Mr. Fixit's Workshop" children explore cause and effect as they build a machine for making hot chocolate. Children select from real working parts, pulleys, and gears to create the machine. At the "Fire Station," children help Smokey get dressed, equip his fire truck, and then put out a fire at Huckle Cat's home.

In addition to novel approaches to a variety of early-learning concepts, *Busytown* has engaging sound effects, music, and both children's and adult voices. The accompanying parent's guide is well designed and provides detailed information about the wide variety of skills touched on in the program. It also contains handy one-page overviews of each scene, including information about their educational content. *Busytown* is wide-ranging, enjoyable, and a good value.

SEE ALSO:
The Playroom
The Backyard

Children's Treasury of Stories, Nursery Rhymes, and Songs



Ratings

Content Strength: **3.7**
User Friendliness: **3**
Management & Options: **1.9**
Support Materials: **1.8**
Value: **2**
Total: **56%**

- *Queue, Inc., 1993*
- *Grades preK–2*
- *Language and literacy: listening, reading, writing*
- *DOS*, Macintosh*
- *DOS version requires 640K RAM, MCGA or VGA color monitor, hard disk, sound card, CD-ROM drive.*
- *Macintosh version requires System 6.0.7, 4MB RAM, CD-ROM drive.*
- *Printer optional.*
- *$49.95*

Queue combines its *Big Book Maker* (page 21) publishing software with five stories, 10 nursery rhymes, and eight songs on this CD-ROM. Children can use this software to increase their listening, reading, and writing skills.

Children select a story, nursery rhyme, or song collection from the main menu. Either they can read the selection to themselves or, if a sound card is available, the selection can be read aloud by the computer. There are some obvious drawbacks. For one, the playback format is not as interactive as that of many of the other books available on CD-ROM (for example, *Just Grandma and Me*, page 117). Individual words cannot be reread or defined while reading or listening to a selection.

Aimed at the preK–2 grade levels, the songs, nursery rhymes, and stories are driven by appropriate picture icons. The format of the publishing program, which appears to be the same as that in Queue's *Big Book Maker* software programs, is print-driven and suitable for grades two and above. No on-screen directions are given to first-time users and children must be able to read layered instructions.

Although the publishing program's title is *Make A Monster* and all activities are centered on the monster theme, the reading and listening selections on the CD-ROM have nothing at all to do with monsters. The publishing component seems to have been included as an afterthought.

Using the mouse or the arrow keys, children select picture icons to move forward or backward in the text, examine pictures, place a bookmark, turn text and sound on and off, or to turn music on and off. Teachers can select the built-in reading comprehension questions, which appear as a child moves through a selection. Once the question mode has been switched on, it stays on until a child completes the selection. The word *correct* appears when the child selects the right answer from three potential answers to each question. No second chance is offered. A score screen displays the number of questions attempted, number of correct answers, and overall percentage of correct answers.

The manual provides helpful information to teachers and parents about the appropriate grade range and approximate running time for each part of the program.

SEE ALSO:
Big Book Maker: Letters, Numbers, & Shapes

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Clock Works

Clock Works helps first- through third-grade children practice their time-telling skills for analog and digital clocks with a series of four activities. The drill-and-practice format also provides practice converting expressions such as "quarter to eight" into digital and analog clock displays. All directions appear on-screen in print form and only the arrow keys, the space bar, and the enter key are required to operate the program.

The activity screens are attractively enhanced with clear, crisp color graphics. Three of the activities, "What's the Time," "Set the Clock," and "Digital Drill," each present a set of 10 problems that require the child to select the right answer from four choices.

The program responds to children's answers with either "Right" or "No, try again." A child can't move to the next problem without selecting an answer. After two incorrect attempts, the correct time is displayed. At the end of each activity, a summary screen shows the child how many first answers were correct. Unfortunately, there is no way to keep a record of student progress. The fourth activity, The "Clock Factory," provides children with the creative opportunity to build their own clock.

There are many teacher options and they form the backbone of this program:

- Time limits per activity can be set at 1-hour, or 30-, 15-, 5- or 1-minute intervals.
- Time can be expressed on a clock face, with numbers and words or as words only. "Quarter" and "half" are used when appropriate.
- Teachers select how many marks (60, 12, 4, or 0) appear on the clockface.
- The number of numerals appearing on the clockface can also be selected.
- Arabic or Roman numerals can be selected.
- Teachers can enter a clockface name, such as a user's name. This name, up to eight characters long, appears during the "Clock Factory" activity.

"Clock Factory" is the only open-ended activity of the program. In it, children can name and create their own clocks from scratch. Children decide on Arabic or Roman numerals, number of clockface marks and numerals, clock casement (such as a teapot, fish or frog), and then set the time the digital clock alarm will ring. Sadly, the clock explodes when the alarm goes off, creating a distraction.

The accompanying teacher's manual includes setup information, ideas for follow-up activities, a correlation of *Clock Work's* activities to thinking skills, and a listing of major math textbooks. There is also

Ratings

Content Strength: **4**
User Friendliness: **4.7**
Management & Options: **3.9**
Support Materials: **4.5**
Value: **3.8**
Total: **86%**

- ▲ *MECC, 1992*
- ▲ *Grades 1–3*
- ▲ *Time: setting and reading clocks*
- ▲ *DOS*, Apple II*
- ▲ *DOS version requires 512K RAM and DOS 2.1 or later, graphics monitor.*
- ▲ *$59*

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information about how to set up *Clock Works* on a network and a quick overview of the product.

The combination of drill, practice, and some creativity make *Clock Works* an enjoyable way for children to strengthen their knowledge of time-related words and numerical representations.

SEE ALSO:

Exploring Measurement, Time, & Money: Level I

Creative Writer and Fine Artist

Creative Writer and *Fine Artist* are two programs that put children in touch with their imaginative and creative faculties. With the zany character McZee as their guide, children have access to writing and drawing studios crammed with tools, or they can go to a project floor where they can make greeting cards, comic strips, and other projects. And if the child's imagination needs prodding, he or she can examine the many samples available. Wherever the user travels within these programs, there are plenty of choices, humor, and on-line help.

In *Creative Writer*, the user starts by selecting one of three areas to visit: "The Writing Studio," "The Projects Floor," or the "Ideas Workshop." In the "Writing Studio," a button bar above the writing screen allows children to make various kinds of type selections, including size, color, font, and style (for example, the word *slanty*, displayed at an angle, is used to represent the italics style). Other options include shadowing a word, shaping (i.e., curving) a word, and special effects such as *shimmer* (one of several options that only show up on-screen). Children are also given the power to select backgrounds, borders, and postage stamps, to create new stamps with drawing tools, or to connect a sound with an object or word.

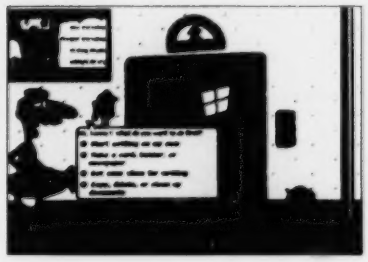
On the "Projects Floor," where the decorator was obviously a taxidermist, users can choose Moosepaper to make a newspaper, Cardvark to make a card, or Banneroceros to make a banner.

In the "Ideas Workshop"—a kind of on-line mini-lesson—a Splot machine allows children to "mad-lib" story starters by putting together beginnings, middles, and ends of sentences using words and rebus-like pictures.

Entering the revolving doors of the *Fine Artist* program, once again, three floors await the user. On the first floor, the "Painting Studio" provides plentiful choices of color, brushes (size and shape), media (chalk or watercolor), stamps, fill patterns, and backgrounds, and a color mixer is available. A word tool allows some of the same text options as those in *Creative Writer* (for example, type font and shaping words).

Next comes the "Projects Floor." There the options are to make a Picture Show, including sound, captions, and special visual effects; use Boa Consticker to make a button or sticker; or make a Cowmic Strip up to four panels long. On the "Drawing Tricks Floor," basic drawing techniques are presented in mini-lessons, for example, making things look three-dimensional, and using negative and positive space in drawing. This is a good place to learn more about the possible uses of tools.

In both *Creative Writer* and *Fine Artist*, step-by-step on-line help and sample end-products are available. Automatic balloon help is pro-



Ratings

Content Strength: **4.4**
User Friendliness: **4.6**
Management & Options: **3.8**
Support Materials: **3.5**
Value: **5**
Total: **86%**

- *Microsoft Corporation, 1993*
- *Grades 2+*
- *Writing, drawing/painting*
- *Windows*, Macintosh*
- *Windows version requires 386 or better processor, Windows 3.1, hard disk, mouse.*
- *Macintosh version requires color monitor, System 6.0.7 or higher, hard disk.*
- *$49.95*

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vided for complex tools (for example, help is given the first three times per session that "removers" are used). Unfortunately, some of the vocabulary used will require adult support. Writing and art projects can be saved in an on-line notebook or printed, but, strangely, they cannot be exchanged between the two programs.

A user's guide provides a thorough description for installing the programs. Classroom Creativity Cards give ideas for additional classroom activities that incorporate both programs. Each card lists corresponding curricular areas and embedded skills (for example, recognizing and creating patterns). Thought has also been given to "multiple intelligences" in the types of activities available on each card.

Overall, *Creative Writer* and *Fine Artist* are feature-laden creative tools. The extensive support materials and built-in tutorials also make these excellent "teachers."

SEE ALSO:

Writing and Publishing Center
Storybook Weaver
My Own Stories
Kid Pix
Kid Works 2

DinoPark Tycoon

DinoPark Tycoon combines math, language arts, planning, and problem-solving skills in an engaging Monopoly-like boom-or-bust activity. Players have full responsibility for equipping and managing the day-to-day operations of a dinosaur theme park.

Each player is actively involved in researching information to assist in making decisions, estimating, planning financial expenditures, and weighing monthly costs against the purchase of new inventory.

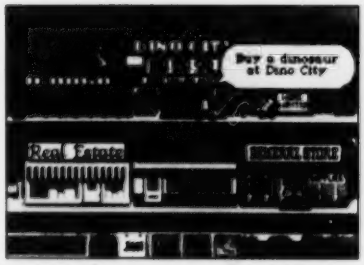
Navigation within the program is facilitated by well-chosen, clear icons. Realistic color graphics, sound, animation, and the wide range of games make this an enjoyable business simulation. A Save Game option allows players to quit and then return to the same point later, a positive feature for the busy school or home environment. On-line information supplements many features of the program and provides ample opportunities for planning, critical thinking, and note taking.

When *DinoPark* users open to the game-selection screen, new players, from child to adult, may choose to watch a demo that shows the creation of the park or move directly to the loan office by selecting the New Game icon. Starting here with a loan of $5,000, users then move to the Business District, where resources such as real estate, fences, and baby dinosaurs must be purchased to open and run the park. On-line help can be accessed at any time by placing the cursor on an item and pressing the shift key.

Selection of a dinosaur egg for purchase illustrates the delightful multimedia elements of this program. The eggs are labeled by species and located in individual nests above a conveyer belt. Players can scroll the length of the belt to select their eggs. Information on a dinosaur's environment, feeding needs, and physical characteristics can be viewed by clicking on the dinosaur's name. Clicking on the dinosaur egg delivers it to the conveyer belt. The egg cracks and the baby dinosaur emerges as it is transported by the conveyer belt.

After the initial purchasing period, pressing the Visit the Park icon activates the rest of the game and the clock starts ticking. Decisions must be made regarding ticket prices, the purchase of new park attractions, and park upkeep. Time management is central to all decision-making in the program: dinosaurs grow and get hungry, people drive up and walk through the park, ticket receipts pour in, and expenses pile up.

Tools at the bottom of the screen help players determine their standing in the game. Pressing the Working Capital button allows players to view the money available for payments or purchases. The Calendar button brings the current month and day onto the screen. Players quickly learn to keep an eye on the Calendar, Working Capital, and time readouts so that they can keep up with expenses. Grocery Cart displays a listing of supplies and dinosaur feeds available in the stores.



Ratings

Content Strength: **4.5**
User Friendliness: **4.9**
Management & Options: **3.6**
Support Materials: **5**
Value: **5**
Total: **92%**

- *MECC, 1993*
- *Grades 3+*
- *Language arts, math, planning, financial skills*
- *DOS*, Windows*
- *DOS version requires DOS 3.1 or higher, 386 processor, VGA color monitor, hard disk, sound card.*
- *Windows version additionally requires Windows 3.1, 4MB RAM.*
- *$69*

With so many decisions to make, play becomes more complex as the game proceeds. At the beginning of each quarter, players must make choices that can only be made then. The screen displays end-of-quarter and end-of-year messages to remind players to use the accounts ledger. Users feel pressured to keep tight control of monthly expenses while still spending enough capital to bring in the most revenue — and, all the while, time is passing. The clock stops ticking only when players are in the Office examining the Ledger. In the Office, players can also check on and repay loans, check park-operation status (from visitor numbers to the amount of Dino food in stock), or even sell the park.

The user's guide is well designed and helpful, but it doesn't provide information on the central role of time management in the program nor does it provide information on the detailed Guide to Dinosaurs that is accessible from the Office. The graphics in this on-line guide, in which eight overlays depict the skeletal development of a dinosaur, are particularly striking. The extensive information provided makes *DinoPark Tycoon* an ideal springboard for off-line activities, and the study of dinosaurs and business operations. This is an exciting program with multifaceted learning activities that are challenging and fun.

Exploring Math With Manipulatives—Level I

This program allows children to experiment with geometric figures, patterns, and shapes, to use the base-ten counting system and place-value concept, to explore number relationships, and to practice problem-solving techniques. The networkable program contains three units: "Pattern Blocks," "Exploring Base Ten," and "Counters and Sums." All unit activities may be child-controlled or preset by the teacher.

Each unit contains exploratory as well as focused activities, with clear, colorful graphics, voice support, and on-screen print directions. The program is consistent with National Council of Teachers of Mathematics guidelines and encourages children to write about their math experiences.

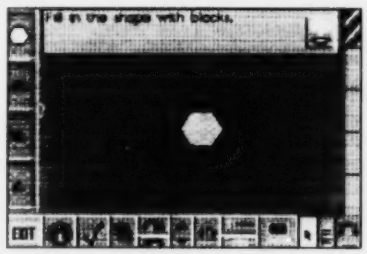
Each unit opens to a menu where children can select activities. If an activity has several options, they are displayed while voice support reads them, and then children highlight their choice. Any activity may be exited at any point.

The on-screen blocks in "Pattern Blocks," like real wooden or plastic blocks, enable children to work with geometric patterns, shapes, and spatial concepts, and involve them in creating designs and using sequencing skills. In "Exploring Base Ten," children can use the on-screen blocks showing ones, tens, and hundreds to work with place values and can use its base-ten counting system to do addition and subtraction, comparing, contrasting, and regrouping. "Counters and Sums" allows children to solve puzzles involving number relationships, addition and subtraction, and patterns.

Each activity comes with an information icon that provides on-line help. Different difficulty levels can be set, and a check option allows children to hear voice feedback on their answers. Voice support provides directions for each new activity opened, but, unfortunately, there is no way to bypass the directions once the user is familiar with them. When a child exits an activity, voice support names the activity and provides information on the number of problems completed and the number correct.

This program is user-friendly and has picture icons that enable the recording of information to accompany work being done on the screen. While writing, a child can print, save, retrieve a file, erase, or clear a screen.

Teacher Options allow teachers to view information about each unit and activity, to specify activities and difficulty levels, to delete



Ratings

Content Strength: **5**
User Friendliness: **3.9**
Management & Options: **4.3**
Support Materials: **4.4**
Value: **3.8**
Total: **87%**

- *EduQuest, 1992*
- *Grades K–2*
- *Math*
- *DOS*
- *Requires DOS 3.1 or higher MCGA or VGA color monitor, 512K RAM, mouse, IBM audio adapter. Printer and networking optional.*
- *$193*

student files, and to change program settings, such as sound. A scoreboard keeps complete records accessible within the set of problems on which the child is working; the scores are available on a summary screen when an activity is finished or exited, and on a printed summary sheet. Student work can also be printed.

The accompanying manual contains extensive information for incorporating the units into the curriculum, reproducible masters, and information for starting and running the program from a network. The program is recommended to supplement math instruction in the early elementary math curriculum. *Exploring Math With Manipulatives—Level 2* and *Level 3* are also available.

SEE ALSO:
Math Ace
Millie's Math House

A Field Trip Into the Sea

A Field Trip Into the Sea allows children to explore organisms inhabiting the rocky shorelines and kelp forests of the sea while strengthening thinking, study skills, and knowledge of sea animals' ecosystems. The open-ended program is user-controlled and has four components: the "Free Exploration" component allows students to investigate the home environments of 76 organisms; a "Data Table" provides extensive information on each organism; a "Food Chain" component helps students discover food sources that organisms eat (there are 36 food chains in the program); and an on-line "Field Guide" provides comprehensive information on 55 of the organisms. Apparently to save disk space, the "Field Guide" covers just 55 of the 76 organisms.

The ease with which students can move among the four components gives this program its strength as a learning tool. While students don't interact with the organisms, they still must compare and contrast information, gain knowledge of various ecosystems, and learn to use an established database as they seek information to solve food-chain problems. And "Data Table" material can be printed.

The program opens to a seaside scene that contains a Location Marker, the Seaside Button (a "home" or return-to-first-screen button), a Text Box identifying the currently selected organism, and three action buttons: Zoom, Link, and Guide. By selecting the Zoom icon students can easily move deeper into one of the program's 23 scenes to obtain more detailed information. The Link button moves a selected organism to another area of the sea or another part of the organism's life cycle, depending on how the organism has been traced up to this point. Continuing to select the Link button will eventually return the student to the original scene where Link was first selected. The Guide button takes the user to the corresponding "Field Guide" section for the current organism.

"Data Table" lists all 76 organisms in alphabetical order and provides information on characteristics such as size, name, and ecological role. "Field Guide" offers five sections of information for each organism: general information, habitat, food, enemies, and friends. Single clicking on an individual picture of an organism in a "Guide" screen will display further information about it in the Text Box.

When selecting the "Food Chain" component from the Menu Bar, students are asked two questions about the selected organism: Who depends on it for survival? and What does it eat? To answer these questions, students must go to the "Data Table" and/or the "Field Guide."

The accompanying teacher's guide provides in-depth support materials, including background information, reproducible activity

Ratings

Content Strength: **4.4**
User Friendliness: **4.3**
Management & Options: **2.5**
Support Materials: **4.5**
Value: **3.8**
Total: **81%**

- *Sunburst Communications, 1992*
- *Grades 2–3+*
- *Science: plant and animal habitats, food chains*
- *Macintosh*
- *Requires System 6.0.7 or higher and 1MB RAM; hard disk recommended.*
- *$99*

pages, and answer keys. While nine books are listed in the bibliography, only three are at the third grade level and none are at the second grade level. Sunburst usually provides excellent support materials for teachers but falls short here.

While this program has many positive features, it doesn't allow students to interact with the organisms and thereby discover cause-and-effect relationships for themselves. Teachers who prefer an active approach to science in which children are directly involved with the subject matter may be disappointed with this program.

Follow the Reader

Follow the Reader is Disney's sequel to another piece of software, *Mickey's ABC's: A Day at the Fair*. This new, voice-supported, interactive reading program allows open-ended, child-controlled creation of "mad-lib" stories by the selection of verbs and nouns to complete sentences. Children see the relationship between language and action as they create stories. When a sentence has been completed, Mickey will perform the actions described.

A sleeping Mickey Mouse awakens and moves as children select verbs and nouns from one, two, or three scrolling lists. These first selections determine story direction. Children using a mouse must manipulate both the left and right mouse control buttons to scroll and select word choices. The right mouse button is also single-clicked to play the child's animation—a somewhat confusing combination. A scroll box at the far right side of the screen cannot be reached, so the child must click as close to the scroll bar as possible. This sometimes causes the choice displayed to be accidently selected.

Children can dress Mickey in formal or casual clothes, make him skip, walk, or run, and have him play with various items. Children can end stories at any time or continue to the end of a play cycle, at which time Mickey goes back to sleep. Stories can be saved, replayed with full animation, or printed.

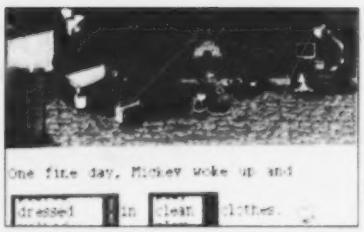
Despite the Disney reputation for excellence in animation, some of the program's animated movement is quite rough. A more serious concern, however, is the sentence structure used after Mickey invites Donald Duck or Minnie Mouse to his home. The narration and verb forms used don't always correspond to the activities depicted.

To quit the program, children must push the escape key. They must then scroll through and select one of eight choices (ranging from saving the story to quitting the program). Although the narrator reads these choices when children pause on a selection for more than three seconds, some children may need adult help with this step.

The accompanying manual presents creative options that adults may share with children and additional concepts that are reinforced when adults use this program with children.

Despite its drawbacks, the Disney characters and "mad-lib" animations make this an enjoyable program that enables young children to explore story creation.

SEE ALSO:
Story Tailor
Bailey's Book House

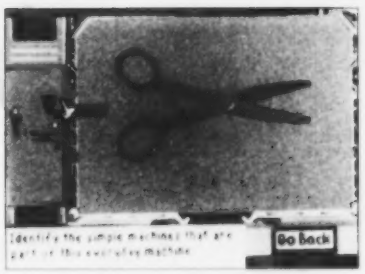


Ratings

Content Strength: **3.8**
User Friendliness: **3.8**
Management & Options: **3.3**
Support Materials: **4.4**
Value: **4.3**
Total: **77%**

- *Walt Disney Software, 1993*
- *Grades 1–2*
- *Language, emergent literacy*
- *DOS*
- *Requires 640K RAM, VGA color monitor, hard disk, and a 256-color VGA, 16-color EGA, or Tandy 16-color graphics adapter. Mouse, sound card, printer recommended.*
- *$49.95*

Gizmos & Gadgets



Ratings

Content Strength: 5
User Friendliness: 4.3
Management & Options: 3.3
Support Materials: 3.2
Value: 5
Total: 84%

- *The Learning Company, 1993*
- *Grades 2–3+*
- *Science, thinking skills, reading comprehension*
- *DOS, Windows*, Macintosh*
- *DOS version requires DOS 3.3 or higher, 640K RAM, hard disk, mouse, and a VGA color monitor (256-color). Sound card optional.*
- *Windows version additionally requires Windows 3.1, 4MB RAM.*
- *Macintosh version requires system 6.0 or higher, color monitor, hard disk.*
- *$59.95*

Gizmos & Gadgets encourages children to explore basic physical science principles through more than 200 puzzles and simulations. The program allows children to use computer representations of simple machines, force, balance, gears, energy sources, and magnetism to build the fastest possible racing machine. Children strengthen reading comprehension and thinking skills as they read vehicle blueprints and relevant parts information, and move to a warehouse to gather parts to build and eventually race their machine against one built by the computer's own designer, Morty the Mischief Maker. If the child's machine is faster than the computer's, he or she moves on to the next level of play. Multiple players can be logged in and their scores saved to continue play later. Players start as Trainees, moving up seven levels to Head Scientist.

Sound effects and animations are included in the program but there is no speech support. The program is child-controlled and print directions are clear with help screens available. Children maneuver through the program using the mouse and/or arrow keys.

Play begins when a child enters one of three research and technology buildings: Alternative Energy, Aircraft, or Automotive. A machine blueprint (such as for a blimp) then appears. An information box at the bottom of the screen reminds the user of the number of parts needed and the number of points they can win by building the machine; these points are accumulated to gain the next level of play.

The parts necessary to build the machine are located in various places throughout the six-story warehouse. The child reviews part descriptions, then goes to retrieve them from the warehouse. More than one type of each part is available, so children must remember, perhaps using notes they write down off-screen, to select precisely the right parts.

Children may opt for further competition by activating the Cyber Chimps, who are also in the warehouse gathering parts for Morty. The chimps have the power to knock players down and steal their parts. Some boxes in the warehouse contain bananas, which, if found by a child, can be stockpiled for use against the chimps. To distract the chimps, users can toss bananas at them.

Gizmos & Gadgets is a very positive tool for both classroom and home investigation of basic physical science principles. The open-ended, exploratory aspect of the program allows children to enjoy learning about these principles at their own pace.

SEE ALSO:

Learn About Insects
A Field Trip Into the Sea
Miner's Cave
Gears
Sammy's Science House

The Graph Club

This program is an exploration of graphs and graphing concepts that is very much in tune with recommendations of the National Council of Teachers of Mathematics for making math a hands-on learning experience. This open-ended, voice-supported program allows children to explore, match, interpret, and create graphs. The program emphasizes that the same data can be presented in several ways.

Language and problem solving are also developed as children ask questions, take notes, compare and contrast information, and make decisions. Numerous symbols, colors, and patterns are available for the creation of data tables and picture, line, bar, and circle graphs. Horizontal and vertical graph formats can be created using 10 scales with up to 20 items each. Excellent printing options are also included.

The Graph Club provides introductory activities, which come with written text and voice narration. The program has two main options, "Student Activities" and "Playground.""Playground" offers four choices: Explore, Create, Match, and Guess. Explore and Create allow children to make graphs and tables using data they collect from classmates or other sources, such as daily tallies of shoe colors. Children may also convert data from one graph form to another; in Match, a graph is displayed, and children are asked to construct another graph in a different form showing the same data. Guess displays a graph for which children must select an appropriate interpretation.

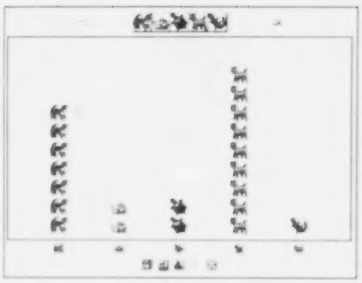
The "Student Activities" component is designed for use with lesson plans included in the program's supporting print materials. The lessons involve both on- and off-computer activities. Three elements are woven into each lesson. First, a chapter of the book *The Incredible Not-For-Profit Pet Resort Mystery* is read aloud by the teacher. Next, children in small groups gather information and finish activities, recording the information in their student activity books. In the final step, they graph the information using *Graph Club* software.

The Graph Club also contains extensive teacher-support materials, including the software's comprehensive teacher options, 28 copies of the student activity book, and a teacher guide full of well-designed graphing activities. *The Graph Club* is ideal for one-computer classrooms because it emphasizes cooperative group learning.

The Graph Club is highly recommended for use in all K–3 curricula, as well as with older children. This versatile and user-friendly program, with its complete teacher options and support materials, will be a welcome addition to children's exploration of graphing concepts and relationships. Most important, *The Graph Club* fills a long-neglected void in computer support for children's math learning.

SEE ALSO:

"Graphing Tools" in *Exploring Measurement, Time, & Money*



Ratings

Content Strength: **4.9**
User Friendliness: **4.9**
Management & Options: **4.5**
Support Materials: **5**
Value: **5**
Total: **97%**

- *Tom Snyder Productions, Inc., 1993*
- *Grades K–3+*
- *Math, graphing, language, problem solving*
- *Macintosh*
- *Requires 1MB RAM, System 6.0.7 or higher.*
- *Printer optional.*
- *$149.95*

Kid CAD

Ratings

Content Strength: **5**
User Friendliness: **4.4**
Management & Options: **3**
Support Materials: **1.5**
Value: **5**
Total: **80%**

- *Davidson and Associates, 1993*
- *Design, spatial relationships*
- *Grades 2–3+*
- *Windows*
- *Requires Windows 3.1 or higher, 386 or higher processor with 4MB RAM memory, hard disk with at least 9MB of free space. Sound Blaster or compatible card recommended. Printer optional.*
- *$28.95*

Kid CAD is an exciting and innovative computer-aided three-dimensional design program for children seven and older. With a smorgasbord of creative options, much like those found in Broderbund's highly acclaimed *Kid Pix* program (reviewed on page 118), children are able to build and create an endless variety of structures in a virtually three-dimensional environment. Children's spatial reasoning skills are engaged as they select materials and create designs and objects. Young minds are also challenged to investigate spatial, proportional, and aesthetic problems and issues.

Designs can be saved or printed out, but no other teacher options are provided. *Kid CAD* is user-controlled with navigation by picture icons, allowing children to select from a multitude of creative options with a single click of the mouse.

Three sites—city, town, and farm—are provided as settings for the construction of three-dimensional structures. Once a site has been selected, the child moves to the Design Studio, the center of this program. Here children select building tools and materials such as blocks or bricks. Designs may be built using a prefab framework, or by starting from scratch with wall pieces or individual blocks of varying sizes. Three-dimensional furniture, people, animals, plants, and trees can also be added to designs.

Children begin by selecting and placing what the computer calls a Base (a foundation), which lets the program know where to place an object. They then select an object, such as a tree, and an outline of the object called the Shadow appears on the end of the cursor and moves with it across the screen. When the child is ready to place the object, the child releases the mouse button. Dots on the bottom of the shadow, called Jacks, are connection points that show where to place an object. Objects may be stacked on top of one another like Legos to build complex structures. A Move button may be used to relocate an object at any time.

Children will enjoy the 10 demolition tools, complete with sound effects, available to erase an individual item or a complete design. Designs may be decorated with solid colors, wallpaper patterns, bricks, or stones. Individual objects may be moved, copied, rotated, or they may be grouped together by selecting the Link icon. When an object such as a building block in the center of a stack of blocks is rotated, the blocks above it will also be rotated. A Hide button allows users to obscure one object with another.

One of the most interesting features of *Kid CAD* is the user's ability to view a design from multiple perspectives at any time using five Camera buttons located in the Toolbar at the bottom of the screen. Children can begin to explore perspective, point of view, and the concept of proportion with these camera functions. The Zoom In button allows a detailed close-up of an area, and the Pan Camera buttons have four

directional arrows to scroll the screen so that a user can see aspects of the structure not currently in view. Pushing the Zoom Out button returns the user to the original view screen. The Rotate button allows the design to be seen from the opposite side, and the Tilt Camera button displays either a ground-level view or a view from above.

Main menu special features include the Go menu, which takes the child to the farm, town, or city; Design Studio, which offers a panoramic view of the current design; and an option for Double Display, which allows both the design tools and the three-dimensional objects to appear in the display window simultaneously.

Kid CAD features an on-screen, walk-through tutorial to familiarize the child with the program. The accompanying manual is thorough, explaining each feature and option. It also includes a helpful "Tips, Techniques, and Terms" section, and an index.

SEE ALSO:

Bird's Eye View
Millie's Math House

Kid Cuts

Ratings:

Content Strength: **4.3**
User Friendliness: **4.7**
Management & Options: **2.8**
Support Materials: **3.4**
Value: **4.5**
Total: **81%**

- *Broderbund Software, 1992*
- *Grades preK–3*
- *Creative representation, cut-outs, writing*
- *DOS*, Windows, Macintosh*
- *DOS version requires DOS 3.1 or higher, 640K RAM, hard disk, VGA color monitor, mouse, monochrome or color printer. Sound card recommended.*
- *Windows version additionally requires Windows 3.1, 4MB RAM, and 386 processor or higher.*
- *Macintosh version requires System 6.0.5 or higher, 2MB RAM, hard disk.*
- *$29.95*

Kid Cuts joins Broderbund's *Kid Pix* and *Kid Pix Companion* programs to provide young children with another avenue for exploring color and drawing tools. All nine projects that children create using the program may be printed and assembled for further play.

The program opens to the Project Picker, which allows children to select from nine project categories: hats, animals, masks, puzzles, dolls, puppets, greeting cards, shapes, or rainy day mystery projects. When a project is selected, four further choices (for example, four hat styles) appear for children to select and then decorate using eight tools.

Kid Cuts has the same screen format and some of the same tools found in the original *Kid Pix* program. Children don't have to worry about coloring outside the lines because the tools don't work on the grey areas of the screen. Projects can be saved so that they can be continued later. The Menu Bar contains the same File, Edit, and Goodies layout as *Kid Pix*. Children must read or be shown the steps necessary to move through menu items. However, experience with *Kid Pix* or *Kid Pix Companion* will carry over to this program and children master them quickly.

The program's tools enable children to draw, fill, and add letters, numbers, and stamps (for example, animals and shapes) to a project; the tools can also erase and undo actions. Text may also be typed by selecting the Text tool and one of eight fonts on the Option bar. The Magic Wand tool displays graphics unique to a selected project, such as decorations for a hat. The manual does a nice job of providing information on the graphic options available for each project.

The puzzle projects offer the greatest opportunities for creative expression. In addition to creating puzzles using the four pattern choices available, children are able to use the Magic Wand to create their own drawings for puzzles. They may also import graphics. The Import option is also available from the File menu and enables clip art, digitized photos, or pictures created in other paint programs, including *Kid Pix*, to be used in *Kid Cuts* puzzles.

Kid Cuts isn't as open-ended as the original *Kid Pix* because the final project's outline is predefined. But this aspect of the program helps the youngest users create satisfying final products. The program's electronic project book is enhanced by a great variety of drawing tools, sound effects, and animations. The accompanying manual provides detailed information on program features and ideas for additional learning experiences using the project printouts.

SEE ALSO:
Kid Pix
Creative Writer and *Fine Artist*

Kid Keys

In *Kid Keys*, children interact with a dragon named Keystone and four friendly monsters in a series of three keyboarding and letter identification activities containing both exploration modes and structured levels of practice. The program's picture menu is clearly designed and its open-ended, user-controlled activities are supported by sound, animation, speech, and colorful graphics.

Typing accuracy is stressed as children first learn to locate home-row keys, then move on to locate other letters, both randomly and in sequential order, and then progress to typing word families and more complex words using one and two hands. The program is very supportive of young learners; it has built-in aids to assist those having difficulty finding a key. In the "Magic Keyboard" and "Dragon Tunes" activities the full keyboard is shown on-screen and the requested key will flash after three seconds to help a child locate it. In "Monster Rescue," which requires the highest level of skill, the support comes after ten seconds. The program does not have specific teacher management features and simply displays a certificate of accomplishment as a child completes a level of play within an activity. The certificates can be printed.

Action starts in the playroom where children meet Keystone, the dragon, and sign in to begin play. By selecting one of the three large, easily identified shields of armor, the child is led to an activity. Each activity screen displays picture icons across the top for returning to the playroom, starting activities, printing parts of the program, and exiting *Kid Keys*. Additional icons to select levels of play and an alarm clock to time movement through levels are available for certain activities.

In "Magic Keyboard," children use the Explore mode to investigate the keyboard. As the child types a letter, it appears in the Hint Window in the top center of the screen. Then, Keystone may say the letter's name, the letter might pop up from the on-screen keyboard in enlarged form and be accompanied by sound effects, or the letter and an accompanying word might be read as they appear in the display window. There is no fixed pattern of effects, which helps keep children engaged. The child may select a Find option from the picture icons at the top of the screen, which verbally asks children to find a specific letter displayed in the Hint Window.

In the second activity, "Dragon Tunes," a musical note plays as children type. The letters typed are displayed in the window above. Children may hear all the notes they have typed in sequence by pressing the return key. The Alphabet Game component of this activity encourages the typing of letter strings, not just isolated letters. A segment of the alphabet (for example, *ABCD*) is displayed. As children type the letters, the corresponding notes of the "Alphabet Song" are played. When a segment has been successfully typed in, the notes are replayed, and when *Z* is reached, the entire alphabet song plays.

Ratings

Content Strength: 5
User Friendliness: 4.5
Management & Options: 3
Support Materials: 3.2
Value: 5
Total: 85%

- *Davidson and Associates, 1993*
- *Grades preK–3*
- *Keyboarding, letter identification*
- *DOS*, Windows*
- *DOS version requires 286 or faster processor, hard disk with 6MB free space, VGA color monitor, DOS 3.3 or higher, sound card, and 550K free RAM. Printer recommended.*
- *Windows version requires Windows 3.1, 4MB RAM.*
- *$24.95*

Another component of "Dragon Tunes" is the Dragon Songbook, which contains 26 song titles, one for each alphabet letter. Titles such as "Eensy Weensy Spider" scroll through the Hint Window and are selected by pressing the return key. To play the song, the child must type the letters of the title showing in the Hint Window. As the letters are correctly typed, segments of the song are played. Relatively rapid, even typing produces an even tempo, which encourages children to type properly. The next letter to be typed is highlighted in red, a really helpful feature for the child looking from the keyboard to the screen and back again.

In "Monster Rescue," the third *Kid Keys* activity, children advance to typing both one- and two-hand letter strings, word families, and, finally, words. The child must help four monsters who beg to be released from a castle. The screen has a pair of gloved hands whose fingers are individually highlighted in red and show correct finger placement for typing. Keystone verbally informs the child which key to type and each letter appears in the Scroll Window at the bottom of the screen as it is correctly typed. Four scrolls must be filled for the monster to be freed.

Play becomes progressively more difficult as the child frees each monster. At Level One children work with single home-row keys, pairs, beginning reach keys, and simple key combinations. At Level Two they work with one or both hands typing trios, quartets, and runs. In Level Three children work with one or both hands to type simple words.

Kid Keys is a delightful and fun way for children to gain letter knowledge and typing skills.

SEE ALSO:

Paws
Stickybear's Typing
Touch Typing for Beginners
Type to Learn

Kid's Studio

Kid's Studio, subtitled *The Next Generation in Storytelling*, is a multimedia platform on which children (with or without adult help) can create story presentations in any of these formats: traditional print, full-screen slide show, or as a QuickTime movie (a digital video format). Features encourage the development of creative expression and graphic design skills as children write and sequence text, as well as create graphics and sound sequences.

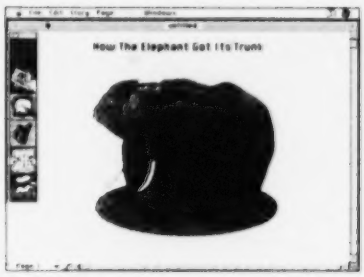
Kid's Studio is an open-ended tool. Starting with a blank story page, children write and edit text using six icons to incorporate any of 200 pieces of clip-art or additional tool-scanned images. They may also record sound clips, create or alter graphics in a paint and drawing component, and determine the sequence and special effects of a presentation. If a CD-ROM drive is accessible, Photo CD (the standard photographic format developed by Kodak) images may also be included in a story. Movement into and out of story-building tools is child-regulated and work may continue as long as the child desires. Children can also move back and forth between pages and alter any elements as often as they like.

While the authors say that the program is appropriate for ages six to adulthood, beginning readers will probably have trouble moving between the menu bar and the icons on screen (for example, to access saved stories. Younger users may also have to struggle to make sense of the program's many tools. The quality of the more than 200 clip-art images stored in the Treasure Chest varies greatly; some are detailed, others, quite crude. Clip-art images cannot be printed out as part of a story; they may only be used in on-screen presentations. And, of course, colors used in the paint portion of the program will be printed as shades of gray unless a color printer is being used.

Several interesting and powerful features are included in the program's presentation tools. The word processor allows a child to add background color, borders, and patterns to text boxes. Selecting and importing clip-art images onto story pages involves only three steps: select, delete, and move. As sound is added to a graphic, the sound clips are numbered sequentially and the sounds can be reordered. The Paint Box contains a feature called Cookie Cutter Technology, which allows children to incorporate 20 shape outlines in their drawings. To familiarize users with the Cookie Cutter's capabilities, step-by-step directions for three detailed projects are included in the user's manual.

The manual also shows some of the many ways a story can be told using multimedia and provides information on how to work with graphics on a page. This program is recommended for those wanting to explore the potential of multimedia.

SEE ALSO:
My MediaText Workshop



Ratings

Content Strength: **3.8**
User Friendliness: **3.5**
Management & Options: **1**
Support Materials: **1**
Value: **4.8**
Total: **59%**

- *CyberPuppy Software, Inc., 1993*
- *Grades 1–3+*
- *Language, storytelling*
- *Windows, Macintosh**
- *Windows version requires 486SX or higher, Windows 3.1, 256-color VGA monitor, 4MB RAM, 5MB free hard disk space, CD-ROM drive. Sound card and speakers recommended.*
- *Macintosh version requires Macintosh LC or higher, System 7.0 or higher, 256-color monitor, 4MB RAM, and 8MB free hard disk space. CD-ROM drive optional; 2MB free hard disk space and CD-ROM drive needed for CD-ROM version.*
- $32.95

Learn About Insects

Ratings

Content Strength: **4.4**
User Friendliness: **4.3**
Management & Options: **2.5**
Support Materials: **4.5**
Value: **3.8**
Total: **81%**

- *Sunburst Communications, 1992*
- *Grades 1–3*
- *Science, animal habitats, language*
- *Macintosh*
- *Requires Macintosh LC or higher. Printer, color monitor recommended.*
- *$79*

Learn About Insects is another in Sunburst's *Learn About Science* series. The other five titles in the series explore plants, animals, the human body, the night sky, and dinosaurs.

In *Insects*, children explore information about 13 insects in eight interactive units featuring animation (but no sound effects). In each unit, children follow written directions and match and label information about each insect as they learn about their roles in the ecosystem. The reading level required for some screens is high because of the science vocabulary used; it would be helpful if the program provided a speech option.

From the main menu, which pictures an ant's nest, children can explore units on insect body parts, growth stages, homes, food sources, and locomotion systems. There is a unit solely on interesting insect facts and a unit designed to promote self-expression. An on-line Field Guide displays and identifies the 13 insects in the program.

The program's built-in word processing feature allows children to add text to any unit. Its creative unit allows children to create and save their own habitat scenes. Its printing capabilities, teacher options, and excellent and extensive teacher's manual make this an engaging piece of content software for early-childhood educators. Options that can only be accessed by a three-step code allow teachers to create individual files for children to store their work—a feature particularly useful for teachers doing portfolio assessment. Another option allows the user to program the word processor with Spanish alphabet characters by selecting Option and one other key.

Unit screens are clear and provide easy navigation signs with directional arrow icons, an information icon, a star icon to replay the current screen, and an ant nest icon for stopping and returning to the main screen. Children click on the information icon for directions in each unit. The units require active involvement, such as moving insect body parts to correct locations, labeling body parts, finding camouflaged insects on plants, or moving a bee to a flower and then to a beehive to see the results of pollination.

The program's mechanism for affirming correct responses is obscure and can go unnoticed. Incorrectly placed labels stay in place as if they were correct. To discriminate correct from incorrect placement, children must understand that object animation occurs only when placement is correct.

The "Create" unit provides characters, objects, backgrounds, words, an eraser, and a print option. The character and object items make copies of themselves as the space bar is pressed. Teachers may pre-select from three Save options in the "Create" unit: Automatic, Prompt, and Manual.

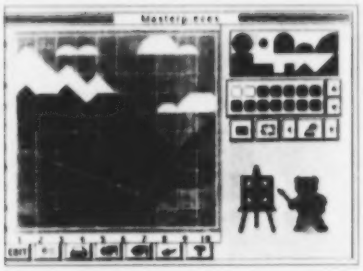
The teacher's manual lists all the scenes in the program. Scenes can be printed as outlines and then colored in by the child; the program has no color-printing option. The teacher's manual also contains pre- and post-computer activities and information that introduces teachers to the software.

Like a good textbook, *Learn About Insects* offers the teacher supplementary teaching ideas and resources for each of the eight units and provides information to link content across the curriculum, particularly in language arts. A four-page bibliography of book and magazine resources is also included. The manual includes a field guide that may be printed, cut, and collated into booklet form. Free space is also included for illustrations by the children.

SEE ALSO:

Sammy's Science House
Zoo Keeper
Our Earth

Magic Bear's Masterpieces



Ratings

Content Strength: **5**

User Friendliness: **4.2**

Management & Options: **2.8**

Support Materials: **3.8**

Value: **4.5**

Total: **84%**

- *KinderMagic Software, 1993*
- *Grades preK–3+*
- *Patterns, spatial relationships, numbers, thinking skills*
- *Windows, Macintosh**
- *Windows version requires Windows 3.1, VGA color monitor, hard disk. Sound card recommended.*
- *Macintosh version requires System 6.0.5 or above, color monitor, hard disk.*
- *$49.95*

Magic Bear's Masterpieces, titled *Mosaic Magic* in previous editions, is an inviting and effective tool for the exploration of creativity and spatial problem-solving. The program's challenges span a wide range of concepts: patterns, colors, shapes, numbers, matching, and two-dimensional grids. There are four games that each have three levels of difficulty and are appropriate to a wide range of ages. The tiling squares come in 14 colors and display 10 shapes. Although not directly taught, graphing skills can be introduced by working with the labels on horizontal and vertical axes. Tools allow tiles to be rotated 90 degrees at a time and allow foreground and background colors to be swapped. The inversion and rotation concepts can be beyond the grasp of very young users.

The program offers an extensive selection of mosaic pictures to work with at each level and many sound effects (such as cats meowing, cars shifting gears, drum rolls). Picture icons at the bottom of each screen provide for easy navigation in and among the games and levels. Children will enjoy using the learner-controlled exploratory options to rotate, invert, and change colors and sound effects. A print option is available and players may save mosaic pictures to disk or load a previously created picture.

Magic Bear's "Tattle Tiles" and "Magic Mirrors" games require children to use spatial reasoning in reproducing a grid of mosaic pieces. "Mosaic 1, 2, 3" provides the young learner with practice in counting and numeral recognition. "Masterpiece" is an open-ended mosaic game in which children create individual mosaics and add sound effects if they wish.

Children are able to work at their own pace and move freely among the tiles needing placement within a design. Children can change levels or quit at any point in all games.

Children start a game by single-clicking on one of the four large, colorful picture icons representing the games in the opening screen. Each game screen contains a grid workspace on the left where mosaics are created, expanded, or matched. The tools and shape tiles needed to create and match are on the right side of the screen. The Magic Bear character stands next to an easel that displays the currently selected tile. Young children will need some guidance to learn that the tile they want to place must be brought to Magic Bear's easel first, before being placed on the grid. The child must make any necessary changes in color, shape, or orientation at the easel before placing the tile in the picture.

Once the child is satisfied with the selection, the cursor is single-clicked on the grid where it is to be placed. If the tile is correct, Magic Bear nods and the child hears an affirmative response, such as "Good job." If

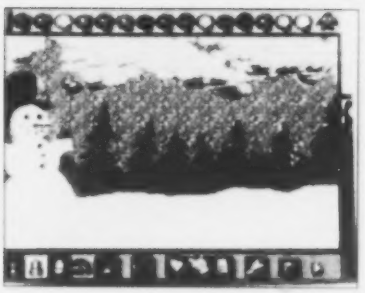
the tile is incorrect, a response of "Uh-oh" is heard. The player has three tries before the correct tile is briefly displayed and then removed; after four tries, Magic Bear permanently places the correct tile on the picture.

The "Magic Mirror" game contains a special challenge. Players must follow a two-step pattern displayed by Magic Bear just above the easel. This may take some assistance from an adult until the child becomes familiar with the task.

The user's manual provides setup information, game descriptions, and useful ideas for home and school projects. No specific teacher or parent options are available. On-screen help is available for using tools and game playing.

These multifaceted games build important math concepts in geometry and space while providing a great deal of fun. *Magic Bear's Masterpieces* is highly recommended for both home and school use.

Mario Paint



Ratings

Content Strength: 5
User Friendliness: 4.3
Management & Options: 2.3
Support Materials: 2.5
Value: 4.5
Total: 79%

- *Nintendo of America, Inc., 1992*
- *Grades preK–3+*
- *Exploration of colors, shapes, letters, numbers, music, and animation*
- *Requires SuperNintendo machine, television.*
- *$29.99*

Mario Paint is a delightful, user-controlled combination of drawing and design activities in which children have open-ended opportunities to explore colors, numbers, letters (including the three Japanese writing systems), musical composition, and animation. The program includes an introductory game, "Gnat Attack," for strengthening mouse-using skills. Swatting the insects is fun and good practice even for accomplished mouse-users.

Mario Paint is user-friendly. Its drawing layout is very similar to the highly successful *Kid Pix* program from Broderbund. A start-up demo of its features plays automatically until the mouse is clicked on Mario, causing the Main menu to appear. Background music and mouse speed can be adjusted from the Mouse icon in the program's toolbox. Available in all screens are Undodog, for undoing the last action, and a bomb icon for exiting the game.

The drawing board, which is also the main menu, consists of three multilayered areas: a color palette of solids and patterns across the top of the screen, a drawing board, and a drawing toolbox with tools and stamps at the bottom of the screen.

The program uses picture icons throughout, except in the more detailed activities, such as music composition and animation, in which one-word labels prevail. There are 15 colors, 75 patterns, and 120 stamp characters available to the child.

Drawings may be saved to work with at a later time. *Mario Paint* also allows children to create and save up to 15 personal stamps and to edit existing stamps. The palette has 14 layers of items to choose from, including both colors and patterns; these are easily accessed by clicking on Mr. Crayon at the far right of the palette. Fifteen eraser options incorporating both visual and sound effects are sure to be a hit.

Clicking on the toolbox's Jump Rope icon takes the child to "Animation Land." Animation, which involves drawing a series of pictures as a child would in making a flip-book, is the most sophisticated of the activities and may not be readily understood by younger learners. Four-, six- or nine-frame animations may be drawn freehand or by using the program stamps.

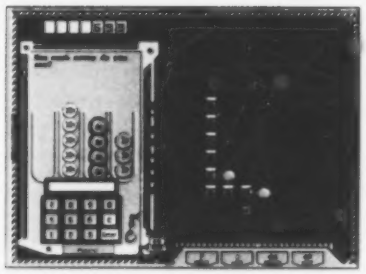
The Path icon adds movement to animated objects. Clicking and dragging the mouse establishes the path the animation will follow. The finished animation will move as fast as the child did when making the path. A counter at the top of the screen allows movement to be repeated. Up to 100 animated steps are possible, with the drawing sequence repeated every 4–9 frames. A Clear button allows the user to change the path and speed. A Piano icon allows music created in the Music composition activity to be played during the animation.

The accompanying user's manual is very thorough and includes a table listing all icons and their actions. "Hints From Professor Paint"

are presented in various areas of the manual, providing tips related to the tool or activity being discussed.

Mario Paint is recommended for children and adults alike. It is a well-produced product that encourages the exploration and enjoyment of drawing, music, and animation. With the *Mario Paint* program and a SuperNintendo player, children are able to create and save animations and musical compositions, a process that used to require stand-alone computers and software.

Math Ace



Ratings

Content Strength: 5

User Friendliness: 4.9

Management & Options: 3.1

Support Materials: 1

Value: 5

Total: 82%

- *Magic Quest, Inc., 1993*
- *Grades 2–3+*
- *Math: arithmetic, problem solving, geometry, graphing, time, word problems*
- *DOS*
- *Requires 640K RAM, mouse, VGA color monitor, DOS 3.1 or higher. Sound card also recommended.*
- *$49.95*

Math Ace—containing 3,000+ math problems, 70 different math concepts, and eight levels of play—is a program that will grow with a child. Two activities, "Math Ace" and "Smart Lab," present eight levels of play for each of the following topics: Basic Concepts, Arithmetic, Real World, Charts/Graphs, Probability, Geometry, and Algebra. Math Ace can track the progress of a whole class of users.

This interactive, child-controlled program uses icons with written labels at the bottom of the screen to provide help, to allow movement to the "Smart Lab," to turn music and sound effects on or off, and to quit the program.

High scores are recorded and displayed on the upper-left side of the screen. Games may be saved for later continuation and a Pause button will hold a game at its current state if a player wishes to pause for a few minutes.

Teachers will particularly appreciate "Smart Lab," which is an interactive, self-paced tutorial with immediate feedback assessment for the child. An excellent database reference section, with a full-screen index of all concepts, is also accessible from the "Smart Lab." Clicking on an item in the index brings up a screen of explanations, definitions, and examples of the concept. Unfortunately, teacher management options allowing preselection of concepts are not included.

For the "Math Ace" activity, play begins at the Mission Control screen, where children sign in, select a "Math Ace" game, pick from three "hunger" levels for the pace-setting virus opponent (Picky, Hungry, or Starving), and select the level of play (Prodigy for children up to age 9, Ace for ages 10 to 12, and Wizard for middle-school children.)

The "Math Ace" game board appears after the math level has been selected. Here, children use math knowledge and problem-solving skills to block the spread of the villain virus Slobberous. Children are asked to identify symbols and to give the correct responses to word problems such as "Which person has the fewest?" "What shape is this?" and "Find the equal sign."

Problems are presented on the left side of the screen; the right side of the screen contains a grid of microcomputer chips that users select one at a time to answer questions and block the spread of the virus. The virus can move in any direction and children must stop it by blocking the microchip spaces in the path of the virus before it reaches the outer limit of the grid. Two chances are given to answer correctly; after the second incorrect response, the computer displays the correct answer and the virus keeps spreading.

In the "Smart Lab," children have opportunities to strengthen math skills through tutoring and practice. An example of each problem type is presented on the right side of the screen; an answer meter takes the place of the score board to give feedback on how well a child is doing.

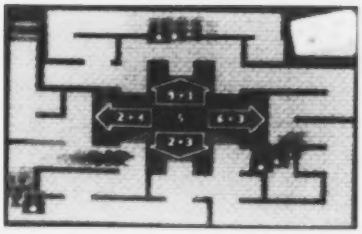
More information about a concept can be obtained by selecting the Help button or one of the examples.

If a player comes directly to the Smart Lab after finishing a game, any problems missed during the game will be included and the child may choose to practice these problems in the Lab. Children can also access eight visual math challenges from the Smart Lab, such as Angle Cannon (a game dealing with geometric angles) or Hide and Seek (a game dealing with coordinates).

SEE ALSO:

Mental Math Games
Stickybear's Math Town
Math Blaster

Mental Math Games



Ratings

Content Strength: 4.5
User Friendliness: 3.7
Management & Options: 2.3
Support Materials: 1.7
Value: 4.5
Total: 70%

- *Waterford Institute, 1992*
- *Grades 1–3+*
- *Math: arithmetic, problem solving*
- *DOS*
- *Requires 640K RAM, VGA or MCGA color monitor, 8MB hard disk space, DOS 3.1 or higher. Sound card, mouse optional.*
- *$49.95*

Mental Math Games takes familiar arithmetic drills and puts them in game-arcade format. The program's seven math games, which include checkers, maneuvering a mouse through a maze of cheese and mousetraps, and knocking over ducks in a shooting gallery, require correct computations in addition, subtraction, multiplication, division, fractions, decimals, percentages, as well as problem solving.

Cleverly timed drills are one of the program's best features. For example, linger too long in the cheese maze, and your mouse will drift into a trap. Such drills are a time-honored way of building computational speed, rapid recall of math facts, and the use of mental math shortcuts such as counting on and separating the tens and ones. Despite its name and the fact that mental math tips are available on-line, the games do little to guide the use of mental math other than applying time pressure.

The program identifies more than 400 math skill objectives from single-digit addition up through fractions and percentages. After logging in at the main menu, players select either Mental Math, Test Review, Mental Blocks, or Fraction-Decimal-Percents. They must select an objective (such as "Divide 1 through 81 by 1 through 9, vertical and horizontal") from a list of up to 355 statements and then select a game.

No teacher options are available to preselect objectives nor is the program designed to automatically determine and adjust to the child's skill level (both of which are available in the much simpler *Stickybear Math* program). Since the overall goal in this program is to master and "check off" the objectives, there is little aside from well-informed adult intervention to prevent children from practicing skills well below their current level or having to work through literally hundreds of objectives to reach their current levels —a common limitation of workbooks that the mental math movement has sought to overcome.

Still, *Mental Math Games* can be a valuable teaching asset when children make the transition from manipulatives (including fingers) to more rapid computational strategies. If children can be guided to an appropriate skill level, the timed practice and game format can make the experience sustained and enjoyable. And, if children can be taught to use mental math shortcuts through off-computer activities, *Mental Math Games* can be an excellent place to practice them.

The accompanying manual contains instructions with relevant screen shots and a helpful section entitled Mental Math Tips.

SEE ALSO:
Math Ace
Math Blaster Plus
Stickybear Math

Mental Rotation

Mental Rotation is part of the *Spatial Ware* series from Greene & Associates that includes *3-D Transformations* and *Folding Boxes*. The series is designed to implement the National Council of Teachers of Mathematics recommendation that elementary students study spatial relationships to prepare them for geometry. *Spatial Ware* programs are well-developed and provide active experiences for the elementary school learner in predicting and constructing rotated two-dimensional geometric shapes.

There are three levels of play: "My First Time," an interactive tutorial introducing the steps involved; "Remind Me," a brush-up practice session; and, "I Know How," a full-play mode with point scoring. Once a level of play has been selected, Quit, Move On, and Restart buttons appear on each screen along with blinking buttons and flashing text to guide player actions.

"My First Time" introduces the concepts of shape, rotation, and position. This is the only section where the third-grade criterion applies because of the reading level involved. Interactive demonstrations show users how to perform the rotation exercises involved in the program.

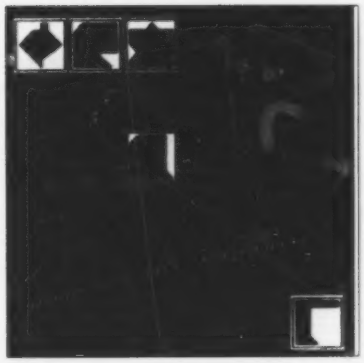
"Remind Me," the practice-only component, focuses on five shapes and their rotations. A shape presented on the left side of the screen must be matched to the rotated shape on the right. After selecting one of the four figures, players may attempt to bring the shape into the same spatial position as the first by using two rotation buttons, thereby proving or disproving the match. Once satisfied with the results, the player selects Yes or No to indicate whether the answer is a match; if incorrect, the player can try again. Players may leave the activity after two successful matches or stay to finish more. When all five shapes have been matched, the shapes are reshuffled and can be played again.

The "I Know How" exercises contain 36 shapes for players to mentally rotate. Players earn points for the least number of tries needed to match a shape. Players score from one to five points for the number of tries it takes to obtain the correct shape.

The lack of teacher record-keeping components is unfortunate. *Mental Rotation* does provide an on-screen score for individual shapes. Players must remember to write down each score on the score card.

Thirty-six black-line masters of shapes used in the program are included for off-computer exercises. The accompanying manual describes educational impact, curriculum integration, management tips, and implementation models and includes a current bibliography.

SEE ALSO:
Kid CAD
Bird's Eye View
Magic Bear's Masterpieces

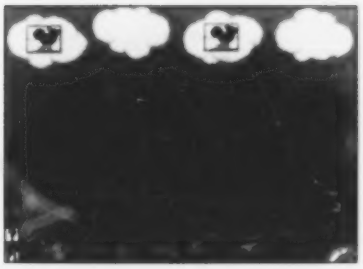


Ratings

Content Strength: **4.5**
User Friendliness: **4.8**
Management & Options: **2.3**
Support Materials: **4.7**
Value: **4.5**
Total: **86%**

- *Greene & Associates, 1993*
- *Grades 3+*
- *Spatial relationships, geometry*
- *Macintosh*
- *Requires HyperCard 2.0, 2MB RAM, hard disk, System 6.0.5 or higher.*
- $22

MetroGnomes' Music



Ratings

Content Strength: **5**
User Friendliness: **3.7**
Management & Options: **2.8**
Support Materials: **4.4**
Value: **4.5**
Total: **82%**

- *The Learning Company, 1992*
- *Grades preK–2*
- *Musical beat, tempo, rhythm, pitch, melody, form*
- *DOS*
- *Requires 640K RAM, DOS 2.0 or higher, sound card, and 16-color VGA, 16-color MCGA, 16-color EGA, 16-color TGA, or 4-color CGA monitor.*
- *530*

MetroGnomes' Music is a musical exploration program based on German composer Carl Orff's experimental approach to teaching music to young children. Its activities allow children to explore the musical elements of beat, tempo, rhythm, melody, and form through creative play, discovery, and problem-solving challenges.

The program opens to a Meadow Menu of five numbered activities that may be initiated in any order and repeated as often as desired. Movement in and out of the five activities may occur at any time. Choices are activated by clicking on their icons, scrolling with the mouse button, using the arrow keys, or typing in the activity number. Help, escape, and return-to-the-menu buttons are provided at the bottom of each screen for easy navigation.

The object of the first activity, "Hi-Lo Rescue," is discrimination between high and low pitches. A fire engine drives up to a building and a firefighting gnome climbs partway up the rescue ladder to a window. Then a tone plays; its pitch represents his height on the ladder. A second tone is then played, and the child indicates whether the second tone is higher or lower than the first by selecting a window above or below the one where the gnome is located. If the child does nothing, the two tones continue. If the child makes an incorrect selection, the firefighter turns his head to beckon the child to try again. When four animals have been rescued, a tune plays and the activity restarts, but at a more difficult level. Four levels of difficulty with increasingly closer pitches are automatically engaged as the child successfully completes each round.

"Match a Tune" builds a song from musical phrases found in eight meadow flowers. In this auditory form of Concentration, the child selects one flower and hears a musical phrase. The child must then find another flower with a matching musical phrase. A little gnome at the bottom of the screen will point to the correct flower if help is needed, but he will only help twice and then go to sleep for the rest of the round. When all four phrases have been correctly matched, the words to the song appear as the song plays. The support of an adult or older child may be required to enable the nonreader to make a connection between the melody and the words.

"Melody Maker," the program's most complex activity, is activated by selecting the bandstand, which comes with a conductor, three band members with instruments, and five xylophones. A child can select one band member to play the tune displayed in the banner. When the child clicks on the conductor and then a band member, they create a new rhythm. When the conductor is selected, the musical notes change from ball and stick form into other graphics, such as fish or cats, adding to the visual stimulation of this activity.

Original tunes may also be created. First, the current tune is erased. A new tune is created by clicking the bars of the large xylophone

at the bottom of the screen. Each note sounds and moves to the music staff as it is clicked. Five musical scales, in a range of styles from blues to oriental, are available. A finished tune can be heard by selecting any one of the band members to play it. New tunes cannot be saved, however. This is the most open-ended of the *MetroGnomes' Music* activities and promises to keep children and adults exploring, creating, and enjoying music for long periods of time.

"Time a Trip" is an exercise in learning to follow the beat. A log car picks up band members to take them to the parade ground. At the traffic light, children are cued with four beats and the light turns green. The child must tap the spacebar at this tempo for the car to move to the first house and pick up a band member. If the child's tempo isn't right, a tow truck comes and tows the car back to the previous stop.

A bullseye with an arrow on it indicates how close the child comes to matching the tempo. The program automatically adjusts the size of the bullseye and the required accuracy if a child is having difficulty. A speedometer at the bottom of the screen shows the target tempo. The numbers coincide with those on a real metronome and the tempo can be changed at the start of a new round. In addition, the tempo will automatically decrease from round to round (slower tempos are harder). This clever beat awareness activity will require some explanation for most children.

In the final activity, "Pick and Play," the MetroGnomes picnic on a meadow. For sing-along entertainment, they bring along a tape player and 27 songs. When a child selects one of the song icons, the words scroll across the top of the tape player as the tune plays. Alternatively, when the notes icon is clicked, one of the 27 songs plays for the child to identify. While the tunes are pleasantly rendered, the words flash quickly across the top of the radio, making them difficult or impossible for beginning readers to decipher.

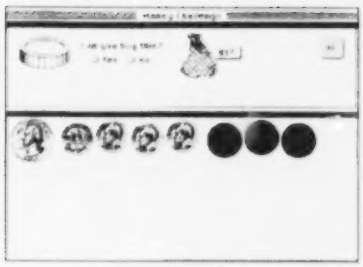
As a guide for adults, the program provides the written words of a song in two of the five activities. The accompanying user's guide contains learning objectives and suggestions for noncomputer music activities.

MetroGnomes' Music is a unique musical addition to an early childhood software library, but adult assistance will be required to guide the child through the activities the first few times. *MetroGnomes' Music* engages a child in the creation and exploration of music while laying a positive foundation for further musical inquiry.

SEE ALSO:

Thinkin' Things Collection 1

Money Challenge



Ratings

Content Strength: 5
User Friendliness: 4.6
Management & Options: 5
Support Materials: 4
Value: 5
Total: 86%

- *Gamco Industries, Inc., 1992*
- *Money skills*
- *Grades 1–2*
- *Macintosh*
- *Requires System 6.0.7 or higher, 1MB RAM for System 6.0 or 2MB RAM for System 7.0, 16 colors or 16 grey shades. Printer optional.*
- *$79.95*

Money Challenge provides a highly motivating format in which children working independently or cooperatively can strengthen their familiarity with money skills in a context of active involvement.

The program opens with the Sign-In screen, where new players alone or in pairs type their names or highlight them on the player list and click OK. (Highlighting and clicking OK is the activating sequence used throughout the program.) The Money screen comes next; at this screen, players select one of four sets of currency. Three sets contain coins only and a fourth set includes dollar bills. After selecting currency (and thereby, the level of play) the children select whether to count coins, make change, use the fewest number of coins and dollars to represent an amount, or determine if enough money is displayed to purchase an item. Finally, children choose the color of their game pieces, and the *Money Challenge* game begins.

When a player answers correctly, the money earned for that problem is displayed. Correct answers earn 5, 10 or 15 cents each, depending on the level of play selected. When 30 cents has been accumulated, the player may purchase and place one checker on the tic-tac-toe board. If a player responds with an incorrect answer, the other player (of a pair) is given a chance to answer. The program displays the correct answer if the second attempt is also wrong. Games are completed when one player has tic-tac-toe or when all nine squares on the board are filled.

The Game Menu allows change of players and access to the teacher management section. A Preferences menu allows users to turn sound effects on or off and to select activities and money sets. On-screen instructions describe the rules for playing and how to enter answers.

Money Challenge features an excellent teacher management component that records individual student data by date of play, sets of money used, activities played, number of correct answers, and the score for each activity. The program allows entry and editing of up to 500 student names either individually or grouped into class lists; to prevent player access, the management component requires a password.

Print options are available, and teachers will appreciate that multiple student records can be printed with just one print command. The teacher can set the program to be learner-controlled or fully preset. On-screen directions are in print form but little reading is required. Coinage is clearly represented, with options for displaying heads, tails, or both. Screens are colorful, and movement throughout the program is user-friendly and straightforward. A child may quit a game at any time. The accompanying program manual is thorough and well-designed.

SEE ALSO:
Money Works
Exploring Measurement, Time, & Money

Music Ace

In this program Maestro Max conducts 24 comprehensive music lessons, starting with staff lines and animated notes. Lessons introduce and develop a basic understanding of musical concepts such as pitch and musical notation. Game-like quizzes playfully exercise lesson concepts. The program's "Music Doodle Pad" allows for creative exploration of music, including composing and saving original pieces. Users have the freedom to start, stop, or repeat an activity at any time. Engaging as it is, the authors emphasize that *Music Ace* should be used as a complement to music instruction, not as a substitute.

After signing in with Maestro Max, a main menu gives the following options: "Music Doodle Pad," "Progress," "Lessons," and "Games." Preferences may also be selected at this time, including mouse options (such as hand or arrow cursors), Maestro options (such as speech rate), and Miscellaneous options (such as treble and bass staffs). Volume can be controlled within any activity.

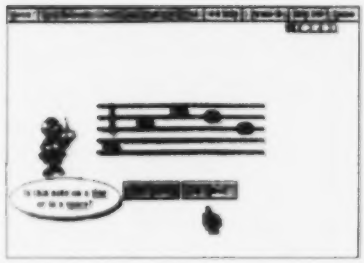
Once a child selects a lesson, Maestro Max guides the child through it. His text-filled speech balloons require reading at the third-grade level. Lessons have several parts and incorporate skills such as reading notes and distinguishing or matching pitch. Opportunities to interact and apply concepts are integral to each lesson. The program emphasizes positive feedback; an incorrect response produces a "Try again" or other gentle hint. For example, when an incorrect key is played, this produces a red note that sounds muted, whereas the correct response produces a green note playing at a normal volume.

"Lessons" presents musical concepts in a well-ordered progression, moving from distinguishing different pitches, to labeling them, to the concept of the octave. A Lesson Progress screen is available to show which lessons or lesson sections have been completed.

The "Games" component consists of three to five different sections, providing practice with the concepts presented in the corresponding lesson. Unlike the lessons, the games have a time element. Taking too long to respond or responding incorrectly will cause a note to burst. Too many incorrect responses will cause the game to end abruptly; children must start a new game to earn points. Points awarded vary according to how quickly correct responses are given. Scores are listed on the Game Progress screen. Winning a game requires the successful completion of each section and is rewarded with clapping.

The "Music Doodle Pad" offers both playback and creative modes. Players can select songs ranging from well-known tunes such as "Yankee Doodle" to classical pieces such as "Haydn's Sonata in A major." As the score scrolls by on the grand staff, each note or chord is animated as it plays.

When the child selects New from the "Doodle Pad" menu, a sound palette appears that allows the child to compose music by



Ratings

Content Strength: **4.6**
User Friendliness: **4.6**
Management & Options: **3.1**
Support Materials: **1.9**
Value: **4.8**
Total: **79%**

- *Harmonic Vision, 1994*
- *Music, music theory, ear training, music composition*
- *Grades 3+*
- *DOS*
- *Requires 386 processor or above, 16MHz or faster, 640K RAM, VGA, hard disk, sound card.*
- *$59.95*

dragging notes (quarter notes to sixteenth notes) onto the staffs. Composers have a choice of six different instruments, and compositions can be saved.

The user's guide presents directions for program installation and thorough information on each component. *Music Ace* allows creativity, from open-ended exploration to serious composition, but also provides the self-paced, sequenced, skill-building lessons and games that 7- to 10-year-olds—and their parents and teachers—will appreciate.

My Own Stories

My Own Stories provides students with open-ended opportunities to create their own stories with a word-processing program that incorporates color graphics, sound effects, and music. There are tools which permit the young author to do some editing of clip-art from the large collection that comes with the program.

Individual stories can be up to 50 pages in length and printed in big-book, as well as single- and double-page formats. The program does not include a spelling checker, a feature which would enhance its usefulness. It is networkable on AppleShare.

My Own Stories is very user-friendly. The main screen opens to a selection of five buttons: Start a New Story, Choose a Story to Finish, Choose a Story to Print, Choose a Story to Read, or I'd Like to Quit Now. The printing, reading, and quitting processes can be explored through a sample story entitled "Ballgame."

To write a story, the user selects Start a New Story. A title screen appears with blank boxes for the title, author, story description or introduction, as well as border and color selection buttons. Users are able to fill in or change any of these items at any point.

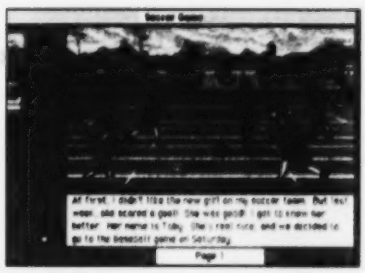
Two options, Text and Picture or Text Only, start each new page. Text Only pages display a typical word-processing page format. Text and Picture pages have a horizontally divided screen with the upper portion for scenery and the lower portion for text. With either format, tools allow sizing, flipping, naming, erasing, quitting the program, and the addition of scenery, objects, color, and sound. Goodies options allow users to delete, insert, copy, and swap pages, and to move to a page.

From a Scenery menu, users can select among six landscapes for the background and many items—from people to homes to special places (such as a gym or swimming pool)—for the foreground. Color options allow for foreground and background selections of pastel, hot, cold, and shade.

The Objects menu lists more than 500 clip-art items in eight categories: adults, kids, animals, vehicles, nature, things, shelters (including homes, businesses, and buildings), and decor. The range of clip-art choices is wide. For example, a trailer is listed as one of the homes.

Clip-art items with labels are shown eight at a time. Directional arrows allow users to move back and forth among the clip-art choices. Once placed on a page, clip art can be deleted or moved as needed. A Preview box in a lower corner of the screen allows users to see a selected object full size before placing it on a story page. Dragging the image from the Preview screen places it on the page.

The Color button allows the user to change foreground, background, skin, and clothing colors. Selecting the Color Option from the Goodies menu will also enable the user to restore the object's original colors. Bigger and Smaller options are valuable for creating perspective.



Ratings

Content Strength: **4.8**
User Friendliness: **4.6**
Management & Options: **3.8**
Support Materials: **4.8**
Value: **4.5**
Total: **91%**

- *MECC, 1993*
- *Grades 2–3+*
- *Language arts, writing*
- *Macintosh*
- *Requires Macintosh Plus or later model, hard drive, System 6.0.7 or higher, 1MB RAM for black-and-white monitor and 2MB RAM for color monitor, or 4MB if running System 7.0. Color monitor recommended.*
- *$69*

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Sound options are available to add touches such as breaking glass, blowing wind, opening doors, and ticking clocks. In addition to the Goodies described above, music can be added to the title and last pages of a story from the 13 songs included with the program, making this a multimedia experience through which stories can be created for others to read.

The File menu allows users to save stories in Read-Only format so they can be read but not changed by others.

The accompanying manual provides setup information, a detailed description of program features, and an extensive "Classroom Resources" section with lesson plans, ideas on how to connect program elements with thinking skills, information on installation of *My Own Stories* on a network, and a bibliography for writing instruction.

SEE ALSO:

Storybook Weaver
Children's Writing and Publishing Center

The New Kid on the Block (Poems by Jack Prelutsky)

The New Kid on the Block, part of Broderbund's *Living Books* CD series, features 18 engaging poems from the popular children's poet Jack Prelutsky. Poems include "My Brother's Head Should Be Replaced," "My Baby Brother," and "When Dracula Went to the Bloodbank." All of the poetry is taken from his best-selling book, *New Kid on the Block*. Animation and sound effects enhance the presentation of this collection.

As the program opens, directions for navigating through the selections are presented by an animated character representing Jack Prelutsky. He informs the user that he wrote the poems and then explains each feature on the Main menu. The names of the poems are presented on screen in a large box with arrow buttons to scroll through. A Read to Me button reads the poems aloud (some are read by the author himself) and a second button, Let Me Play, allows the child to explore.

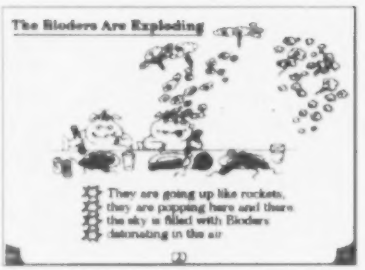
Children are able to move backward and forward, page by page, through the poems. They can highlight and hear individual words, phrases, or lines of poetry. As a poem is read, phrases are highlighted, emphasizing whole thoughts rather than isolated words. When a child selects an individual word or phrase to be reread, additional animations beyond those shown during the reading of the poem add to the meaning.

Children will enjoy the animated antics in "Forty Dancing Bananas," which starts with dance music and four rows of bananas rhythmically dancing and singing their way onto the screen. In "When Tillie Ate the Chili," supplemental animations help give the meaning of descriptive words such as *erupted*, *gulped*, *wheezed*, and *sputtered*.

No adult options or other features are available on the CD. The multimedia presentations of the poems are of excellent quality and well worth the investment. This program demonstrates why children's literature is well-suited to CD-ROM technology: stories and poems offer lots of ideas for full multimedia presentations.

SEE ALSO:

The Tale of Peter Rabbit
A Beautiful Feast for a Big King Cat


The Blobers Are Exploding
They are going up like rockets,
they are popping here and there,
the sky is filled with Blobers
detonating in the air

Ratings

Content Strength: **4.8**
User Friendliness: **4.4**
Management & Options: **1**
Support Materials: **1**
Value: **4.3**
Total: **71%**

- *Broderbund Software, 1993*
- *Grades K–3+*
- *Poetry, reading, and language*
- *Windows, Macintosh**
- *Windows version requires Windows 3.1, 256-color VGA monitor, sound card, CD-ROM drive.*
- *Macintosh version requires 4MB RAM, System 6.0.7 or higher, CD-ROM drive.*
- *$69.95*

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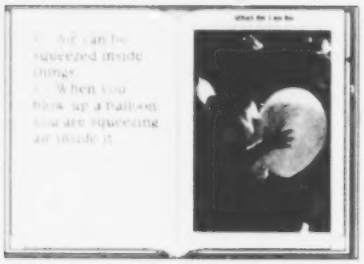
Our Earth



Ratings

Content Strength: 3.4
User Friendliness: 3.9
Management & Options: 3.9
Support Materials: 3.4
Value: 3.2
Total: 73%

- *National Geographic Society, 1993*
- *Grades preK–2*
- *Science*
- *Macintosh*
- *Requires 2MB of RAM, System 6.0.5 or higher, CD-ROM drive.*
- *Color monitor recommended.*
- *$89*

The National Geographic Society, along with Discis Books, has produced a series of science CD-ROMs for grades K–2, available in both English and Spanish. *Our Earth* contains electronic books on four topics: maps, the earth, rain, and air. The text is accompanied by photographs from The National Geographic Society and has voice support. On-line teaching activities and a print copy of each book are included.

There are large photographs spanning the two-page format of the books with one or two lines of text printed below. Words are highlighted in phrases as they are read. Users control their pace and direction as they move through the book by clicking-and-dragging on individual words, speaker icons, pictures, and folded page corners. Sound can be turned on or off by clicking on the print or photograph areas at any point. A child can choose to read individual words, sentences, or any part of the book. Pages can be turned forward or backward. The reader can hear words pronounced by syllables or as whole words.

The program also includes a file that lists all words in the book alphabetically, by parts of speech, and by frequency of occurrence. The Recall function pronounces up to 32 words from this list, selected by the user. If more than 32 words are recorded, the last word on the list is replaced by the incoming word. The list can be erased or saved.

Adults can customize the narration rate to match an individual child's ability and adjust this rate as the child's skills grow. The Customize option allows adults to choose the way that words, speech buttons, photographs, and page corners work. Additional custom settings enable adults to choose whole-word or syllable-by-syllable pronunciation, or identification by parts of speech. The sequencing can also be changed (for example, to give syllable-by-syllable pronunciation before whole-word pronunciation). Pause increments, sound effects, volume, font, size, and line-spacing options can be adjusted as desired.

Adults can save individual user settings in the program's Bookmark files. This feature allows multiple users to open the book to the setting established specifically for their use.

Our Earth does not live up to the standard of quality usually associated with educational material from National Geographic. The program's main strength is the Discis Books format, despite the somewhat awkward design of the books. Other titles in the *Wonders of Learning CD-ROM Library* are *A World of Animals, The Human Body, A World of Plants,* and *Animals and How They Grow.*

SEE ALSO:
Zoo Keeper
The Backyard
Sammy's Science House
The Tale of Peter Rabbit

The Playroom

The Playroom is an upgraded version of the highly effective program introduced by Broderbund in 1986. The program now comes with improved speech and sound effects and improved activities. In *The Playroom*, children can explore numbers, time, the alphabet, and other early learning concepts. Unfortunately, the opening screen advertises two of Broderbund's other programs; it would have been better to relegate this to print. The advertising can be avoided by starting *The Playroom* from its own directory.

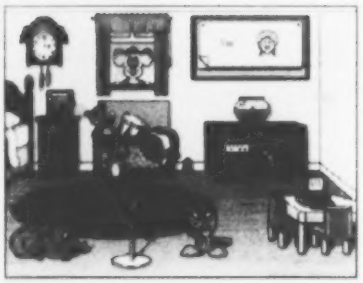
The playroom pictured in the program's opening screen is the main menu. From here children can access six activities by clicking on objects in the playroom; for example, clicking on the ABC Book allows the child to work with letters, while clicking on the clock allows the child to work with time. Many playroom objects animate when clicked; for example, the bird sings and the cyclops opens its eye and follows the movement of the cursor. Each activity has a playroom icon that returns it to the Main menu. Exiting from the program requires a special key combination designed to prevent children from getting lost in some other area of the disk drive; this feature can become a bit of a nuisance when the program is used with a children's menu program like *Kid Desk*.

Playroom's "Clock" activity displays both digital and analog clock faces. Children change the clock in hourly increments by clicking the hands or numbers. As the clock changes, the new time is announced by voice and one musical note appears above the clock face for each hour represented. Pepper Mouse, on the left-hand side of the screen, enacts activities that might occur at that time of day. Clicking on the scene at the top of the screen will change the time and Pepper's activity from A.M. to P.M.

The "Computer" activity has both exploratory and query modes. In the exploratory mode, letters appear on the computer screen as they are typed or clicked, and their names are spoken. Waking up Pepper Mouse starts the query mode; eight gift boxes appear. As the child clicks on a box, the name of the gift appears in print, and Pepper instructs the child to type the gift's name one letter at a time. The keyboard row in which the letter appears is displayed for orientation. If a mistake is made, help is provided until the correct key flashes. When a word is completed, the program pronounces each phoneme and highlights each letter. Upper- or lower-case letters may be selected.

In *Playroom*'s "ABC Book" activity, children place objects on one of three story scenes by clicking on letters; each one is named aloud, and an object whose name begins with each letter appears. The objects can then be moved anywhere in the scene. Completed scenes can be printed.

Clicking on the mousehole moves children to the "Mousehole" board game. This counting game has three levels of difficulty. The first level allows moves of up to four spaces, the second allows moves of up



Ratings

Content Strength: **4.5**
User Friendliness: **4.7**
Management & Options: **3.9**
Support Materials: **3.6**
Value: **4.8**
Total: **87%**

- *Broderbund Software, 1993*
- *Grades preK–1*
- *Letters, letter sounds, words, numbers, counting, matching, felt-board pictures*
- *DOS*, Windows, Macintosh*
- *DOS version requires DOS 3.0 or higher, 640K RAM, hard disk, VGA color monitor, mouse. Sound card required for speech.*
- *Windows version additionally requires Windows 3.1, 4 MB RAM.*
- *Macintosh version requires System 6.0.5 or higher, hard disk, color monitor.*
- $59.95

to six spaces, and the third allows moves of up to nine spaces. The game may be played against a partner or the computer.

Playroom's "Spinner Toy" activity helps young children match numbers to sets of objects. Children can count in both exploratory and query modes with three levels of play. A child selects a number (from 1 to 12) from one spinner and an object from the second spinner; the computer then displays the chosen number of objects (for example, if the child chooses 9 and the duck, 9 ducks will appear on the screen above the spinners). In the query mode, the child selects the correct numeral to match the number of objects displayed.

"The Mixed-Up Toy" allows children to mix and match three body parts of a variety of toys. This activity also has a print option.

Adult options include the ability to limit the numbers in the "Spinner Toy" game (in query mode), the keys in the "Computer" game, or the letters in the "ABC Book," as well as to enable or disable the printer option and to turn sound off or on. The accompanying manual provides extension activities and reproducible pictures of several characters from the program.

SEE ALSO:

Busytown
The Treehouse
The Backyard

Reader Rabbit 2

Reader Rabbit 2 joins other programs in the *Reader Rabbit* series in providing young readers with practice in alphabetizing, rhyming, identifying long and short vowel sounds, and creating compound words. Children travel the Wordville train to one of four games, each containing four levels of difficulty. Players are automatically moved to the next level when a game is finished—a process that may become tedious for some children unless they are advanced manually. Sound effects and music are integrated throughout the program, and incorrect answers are indicated by clever visual effects. In "Vowel Pond," for example, fish caught on an incorrect response jump out of the bucket and back into the pond.

Players and teachers can keep track of the progress of up to eight players with the Score Chart. In The "Alphabet Dance," "Vowel Pond," and "Word Mine" games the program tracks the number of correct answers, the number of tries, and the percentage correct for each level. In the "Match Patch" game the program records only the number of games completed. Unfortunately, there is no print option for scores, and the limit of eight records makes it awkward to use the scorekeeping feature in typical classes of 25–30 students. The Options menu allows a player to change levels at any time or turn voice and music off and on. The Help menu is available at all times.

Reader Rabbit 2 begins at the Ticket Booth, where the child signs in, assuring that the new scores will be added to any previous ones. Four numbered signs lead to "Word Mine," "Vowel Pond," "Match Patch," and "Alphabet Dance." Reader Rabbit drives the Wordville train to the selected game location. Movement through the program is very straightforward, and written directions are displayed on the screen. To change games or exit, the train returns to the station.

At the "Word Mine," children choose small words to make a compound word or select beginnings or endings to add to words. Three correct answers earn one crystal token and a new set of words. Players must earn 10 tokens for one super crystal; and they have to earn three super crystals to move to the next level (a child must recognize and form 90 words to move out of each level). The next two levels increase in difficulty but have the same scoring requirements. The fourth level has two options: to create five-letter words by adding three additional letters when the first two letters of a blend are displayed, or to create words of up to five letters when the first half of a compound word is displayed. The child can press the return key for a new set of letters. The open-ended nature of this fourth level is compromised by the lack of authentic feedback, since (as the manual notes) the program may not recognize all correct responses.

"Vowel Pond" is the only part of the program that uses speech, though speech could enhance the other activities. In this activity a helpful skunk holds a card displaying a long or short vowel sound. The

Ratings

Content Strength: 4
User Friendliness: 5
Management & Options: 3
Support Materials: 4
Value: 5
Total: 86%

- *The Learning Company, 1992*
- *Grades 1–2*
- *Language and literacy, phonics, compound words, alphabetizing*
- *DOS*, Windows, Macintosh*
- *DOS version requires DOS 3.3 or above, color monitor, hard disk. Sound card recommended.*
- *Windows version additionally requires Windows 3.1, 4MB RAM.*
- *Macintosh version requires 1MB RAM for black and white, 2 MB RAM to run in color, System 6 or higher, 5.6 MB free space on hard disk.*
- *$79.95*

skunk names and pronounces a vowel, and a word containing the sound is displayed and pronounced. Fish then swim by Reader Rabbit's boat with words containing various vowels. If a word contains a matching vowel sound, the child clicks on the fish and it jumps into the bucket on the boat. If a child does not match all the vowels correctly in a set of fish, the skunk repeats the vowel sound as the incorrectly matched fish from the set swim by in the opposite direction.

Players arriving at the "Alphabet Dance" must line up four dancers in alphabetical order to see them dance. If the child makes a mistake, the incorrectly placed dancers sit down and wait to be placed again. Alphabetizing is on the basis of first letter and, later, first and second letters combined.

At the "Match Patch," children find rhyming words, opposites, and homonyms hidden behind six pairs of carrots in a Concentration-match format. Six pairs matched correctly earn two carrots. Ten pairs earn a super carrot, and three super carrots move the player to the next level.

A clear, well-written manual with support information and a description of the educational focus accompanies the games.

Reader Rabbit 3

Reader Rabbit 3, like other programs in the *Reader Rabbit* series, strengthens reading and writing skills within a meaningful, enjoyable learning environment. This program focuses on a child's ability to identify the *who*, *what*, *where*, *when*, and *why* elements of a story by involving the child in the workings of a newspaper as a reporter on the "Daily Skywriter." A round of play with *Reader Rabbit 3* produces a printed newspaper based on the child's work in each activity.

Like other *Reader Rabbit* programs, *Reader Rabbit 3* has multiple levels of difficulty that may be changed during play or before play starts by using the teacher option. Children are asked to highlight sentence elements that answer printed *who*, *what*, *where*, *when*, and *why* questions about the story. A Help button provides on-line assistance, if needed. Children sign in to enter Wordville and then choose from the activities on the Main menu screen; the fourth requires completion of the other three.

The "What's the Scoop" activity takes children to the newsroom of the "Daily Skywriter." A phrase is presented on screen and the child must click on the correct response to identify the phrase as a *who*, *what*, *where*, *when*, or *why* sentence part.

The "Clue Hounds" activity involves finding and highlighting the part of a sentence that answers one of these questions. A hint is given if an incorrect choice is selected.

"Sneak Peek" explores word order in sentences. A sentence is displayed in both the active and passive voice on the screen. The child is asked to highlight the sentence with a specified word order. This is a good preliminary exercise for distinguishing active and passive voice and for identifying and labeling parts of speech. The child can click on the Cartoon icon to watch the completed story play as a cartoon.

In "Ed Words," children create sentences by filling in blank segments in Editor Ed's story. Each story contains several blanks that must be filled in to complete a story. The activity has two layers of interaction. The child must choose one of three sentence parts to fill a blank in the story. Two incorrect responses are allowed before Ed gives a hint. Children may also pick a specific word or phrase of up to 24 characters to fit the blank. This word or phrase may be chosen from an option list, or a personal choice may be entered.

Reader Rabbit 3 ends with "The Printing Press," which produces a printable "newspaper" by tying together the individual exercises. A child must complete at least one story in each of the preceding activities to print a newspaper. The child's name appears at the top left corner of the screen followed by a list of completed activities. A scroll bar allows the newspaper to be read on-screen. Multiple copies may be printed and the newspaper can be saved on disk. Once a child leaves "The Printing Press," however, the printed stories cannot be reworked. As the manual says, "It's old news."

Ratings

Content Strength: **4.5**
User Friendliness: **4.4**
Management & Options: **2.9**
Support Materials: **2.2**
Value: **4.5**
Total: **78%**

- *The Learning Company, 1994*
- *Grades 2–3+*
- *Reading, writing*
- *DOS*, Windows, Macintosh*
- *DOS version requires 286/10MHZ or higher, DOS 3.3 or higher, 640K RAM, 3MB hard disk space, 256-color VGA monitor, Mouse, sound card, printer optional.*
- *Windows version additionally requires 386 or higher, 4MB RAM.*
- *Macintosh version requires System 6.0.5 or higher, color monitor, hard disk.*
- *$79.95*

Reader Rabbit 3 is an enjoyable avenue for young children to begin analyzing and understanding sentence structure. This excellent teaching tool would have been enhanced if teacher options for recording the number of attempts and percentage of correct responses had been included.

SEE ALSO:
Stickybear Reading
Follow the Reader

Rick Ribbit: Adventures in Early Learning

This program is multilingual; the player can choose English, Spanish, German, Italian, or French by pressing a language button. On-screen text, however, is always in English. The child can use the mouse or the arrow keys to select which way Rick Ribbit, a frog, should venture when he appears, but there is no cursor on the screen. Instead, mouse movements or arrow keys light up various pointing fingers, an ungainly and confusing graphic.

To the left of the main menu, Rick can travel to the Hopping Rocks for four levels of alphabetizing, hearing letter names, or hearing letter sounds. In one game, the child can move Rick to lettered rocks to hear letter names and sounds. The letters must be selected in an order that spells a simple three- or four-letter word to get Rick from one side of the swamp to the other.

If the child selects a letter rock that isn't part of a word, the rock turns into a turtle that sinks, prompting a new set of letters to appear. Unfortunately, some combinations accepted by the program are uncommon for the target audience (such as *pip* or *sop*) and some do not actually form a word (*min*). In another hopping rocks game, Rick must hop in ascending alphabetical order—a concept appropriate for the upper end of the program's age-range.

To the right of the main menu, Rick can dive into direction drills. Each item Rick encounters in his underwater swim provides the child with three arrow choices to determine whether Rick goes *over*, *under*, or *through*. Some choices are questionable (Can Rick really go *through* a fish? Should children watch Rick explode a building to get under it? Should children watch Rick swim under a boat's motor?) Some portrayals of words are ambiguous (for example, *through* a camouflaged helicopter looks more like *in* and *out*).

At Rick's home behind the main menu the child can choose from one of four "soups" to match numerals, colors, letters, or shapes. Three choices appear in each soup. A thought bubble shows which choice Rick is thinking of as he says its name. If the child matches Rick's choice, he slurps it up. Rick shakes his head for incorrect choices; he allows three tries before he eats the correct match.

The child can also enter Rick's bedroom and change his attire and appearance by selecting hats, eyes, noses, mouths, shirts, pants, shoes, and other items. This activity is strictly free choice— anything goes. Rick can be put to bed, where he dreams about counting. The child

Ratings

Content Strength: 2.8
User Friendliness: 2.9
Management & Options: 2.9
Support Materials: 3.3
Value: 2
Total: 57%

- *Tadpole Productions, 1994*
- *Grades preK–1*
- *Colors, shapes, numbers, letters, alphabetizing, phonics, spatial relationships*
- *Windows*
- *Requires 386/20MHz or higher, Windows 3.1, 4MB RAM, VGA color monitor, hard disk, CD-ROM drive, MPC sound. Sound card recommended.*
- *$49.95*

can select a number from 1 to 9 in the on-screen bar and Rick will count out that many objects (for example, houses) in his dream.

A user's guide offers installation instructions, a description of each activity, and cooperative and developmental learning ideas for computer play. This information is also available on-screen by selecting the Help icon on the Windows program-group screen. Also on this screen, adults can choose a configuration icon that allows adjustments in volume and mouse sensitivity. Language options can also be adjusted. Because of its inaccurate and inappropriate information, however, this program is not recommended.

SEE ALSO:
The Playroom
Busytown

Sammy's Science House

Sammy's Science House is the third program in the *Early Learning Neighborhood* series, which includes *Millie's Math House* and *Bailey's Book House*. Like its predecessors, this program provides multiple avenues for exploration. Five engaging activities provide opportunities for children to sort, sequence, construct, classify, and observe.

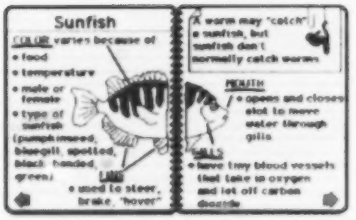
Four of the activities have both a divergent Explore/Discover mode and a convergent Question/Answer mode. Even in the Question/Answer mode, the science content has real substance; the situations presented are realistic and the questions often have more than one correct answer. Activities with both modes start in the Explore/Discover mode.

The opening screen is Sammy's Main Room, where Sammy, a snake, offers a welcome. The child clicks on an animated bin and arrives at the "Sorting Station," where two bins appear. Seven to 12 items come down a chute, and the two bins state their sorting categories (for example, "Trees" and "Flowers"). To sort, the child clicks on a pictured item and drags it to the appropriate bin. If an item is moved to an inappropriate bin, the bin says, "That belongs somewhere else," and the item returns to the scrambled assortment. Sorting an item correctly produces a positive response such as "Way to go" or "Thanks." Clicking on a bin causes items that belong in that bin to twinkle, a hint for correct sorting.

Categories can overlap and sometimes an item may be placed in more than one bin (for example, an angelfish could go in either the "animals with fins" or the "fish" bins, but the killer whale could only go in the "animals with fins" bin). Clicking on the chute's lever will bring up new categories and items to sort. The child also has the option of selecting two, three, or four bins to choose from. To enter the Question/Answer Mode, the child clicks on the framed picture of Serena Squirrel. Serena then asks the child to finish a sort once it is started.

Back at the Main Room, the child can click on a pegboard work area to go to the "Workshop." The child selects a project by scrolling through blueprints. A base for the project appears on the workbench, and three or more parts appear on the pegboard. The child then builds an item by dragging parts from the pegboard to the base, and may construct the object as shown in the blueprint or put parts together in another way. Six paint cans on the workbench allow children to paint their creations.

In the building activity's Question/Answer mode, there is only one correct way to build a project. When the child clicks on a part, the correct placement lights up in the blueprint. Correctly placed parts snap into place. Buzzy Bee offers both verbal and visual assistance for incorrect placements. Once an item has been correctly assembled, Buzzy animates


Sunfish
COLOR varies because of
• food
• temperature
• male or female
• type of sunfish (pumpkinseed, bluegill, spotted, black-banded, green)
FINS
• used to steer, brake, "hover"
A worm may "catch" a sunfish, but sunfish don't normally catch worms
MOUTH
• opens and closes alot to move water through gills
GILLS
• have tiny blood vessels that take in oxygen and let off carbon dioxide

Ratings

Content Strength: **4.9**
User Friendliness: **5**
Management & Options: **3.3**
Support Materials: **4.3**
Value: **5**
Total: **92%**

- *Edmark Corporation, 1994*
- *Grades PreK–2*
- *Science, sorting, sequencing, building, weather, animal habitats*
- *DOS*, Windows, Macintosh*
- *DOS version requires DOS 3.1 or higher, 386/16MHz or higher, 640K RAM, VGA or EGA monitor, 11MB free hard disk space, mouse, sound card. Printer recommended.*
- *Windows version additionally requires Windows 3.1, 4MB RAM.*
- *Macintosh version requires SE or later, System 6.0.7 or higher, 2MB RAM for System 6, 4MB RAM for System 7, 11.5MB free hard disk space, mouse. Printer, TouchWindow optional.*
- *$59.95*

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it (by riding on the newly built rocking horse, for example).

Clicking on the oak tree outside the Main Room window takes the player to "Acorn Pond," where changing seasons bring characteristic changes to the environment and to animal behaviors. The child can click a season button, such as a snowflake for winter, to change the season. Clicking on pictures produces spoken information about an animal or plant. The child can click on a thermometer to hear the temperature read in Fahrenheit and Celsius and a statement about the season. An animated scene portraying that season follows. Clicking on a field notebook icon fills the screen with printed and illustrated facts about one of the animals that live in or around the pond. Pages can be turned to different animals by clicking on folded page corners. The child can click on the framed picture of Olivia Owl to hear *who* questions about an animal. To respond, the child clicks on an animal. Olivia then says, "Right" and states the answer to the question or asks the player to try again.

"Sammy's Weather Machine" enables the child to create his or her own weather by selecting temperature, moisture, and wind conditions. Each choice is spoken and printed on the blank television-like screen. Moisture properly adjusts to temperature, and vice versa. For example, if the temperature selection is "hot," then "light rain" and "heavy rain" are choices. But if "cold" is selected, the choices become "light snow" and "heavy snow." Once selections have been made, the child can click on "go" for an animated weather report.

In the Question/Answer Mode, children are asked to create a specific weather condition, such as "a warm day with light rain and strong winds." Frederick Bear will prompt, "Please try again" and remove any incorrect choices until the proper settings have been selected.

"Make-a-Movie" can be accessed by clicking on the projector in Sammy's Main Room. "Make-A-Movie" has only a Question/Answer mode. Children can make three- or four-frame movies by dragging pictures to the frames and correctly sequencing them. Repeated mistakes in frame placement will cause the unsequenced pictures to sort themselves into the correct sequence.

Once a correct sequence has been reached, Ramon Rabbit moves the player into the theater where animals are eating popcorn and are ready to view the movie. After the movie runs, it can be replayed or played in reverse. There are two or more correct sequences for some picture sets in this activity (for example, a man takes off in a hot air balloon and sails into the distance; or a hot air balloon in the distance comes in and lands). The reversibility of some sequences helps keep the children's discussion focused on the underlying cause-and-effect relations.

Adults can use options to monitor print availability and to turn theme music on and off. A single-switch option, which allows automatic or switch-activated scanning, is also available for users with special needs. The user's manual is thorough and easy to use, and includes "Together Time" activities that a parent or teacher can use to extend concepts from each activity.

Spelunx and the Caves of Mr. Seudo

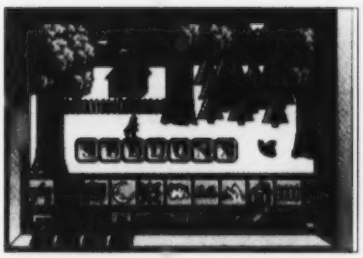
As children use the mouse to maneuver through Professor Spelunx's kingdom of caves and passageways, numerous interesting learning opportunities arise: children can perform simple experiments with gravity, time, and distance; explore music, movement, and animation; write diary entries; and read the history of the subterranean setting of the program. Three underground activity rooms encourage curious users to discover the program's secrets.

The journey begins at the mountainside door, where an elevator transports the player to an underground maze of passageways. A map indicating the current position appears in the left-hand corner. Behind a submarine-type door is the Spelunx-Nemo Room, where planets, a moon, or a satellite can be viewed through the "P. Seudo Scope." The view can be changed by pressing coordinate buttons on the nearby planet finder. By moving the mouse, players may discover the secret for reaching the lower level of the room, where more information about planets is available. Also in this room, the child can experiment with the voltage and gasses of discharge tubes (like fluorescent lights), watch the speed of stones falling from various heights, or draw a picture and have the computer redraw it.

Another room the player may discover is the Spelunx-Tumnus Room, which contains a mixture of language and life science activities. In the "Yodel Toasters" game, the child tries to bounce a piece of toast to a man on a platform above before it burns. This uses eye-hand coordination but is mostly for fun. Clicking on the block tower enables the child to play "Singing Sentences" by lining up word blocks to hear them sung. Since words can be arranged in any order, this is a game of word play in which nonsense strings can be more fun than meaningful sentences. Without a way to introduce new words, however, the fun is short-lived. In the "Criss Ants" game players also have the opportunity to change the maze environment for two ants who are foraging for food. Children can move rocks and food and watch the ants learn new paths.

Also in the underground realm is the Spelunx-Arwen Room, home of the "Stamp-Animator" activity. The main buttons on the Animator are similar to a tape recorder: Rec, Erase, Stop, and Play. The recording function allows children to use the mouse to select a picture and stamp it onto the blank screen. Once pictures are recorded, the Animator can be set at different speeds and the child can watch a flipbook of his or her stampings.

The "Programmable Polka Machine" involves two components: Polka Dancer and Polka Musician. The child can choreograph the polka dancer's movements by placing pictured tiles in the form of a sequential



Ratings

Content Strength: **3.8**
User Friendliness: **3.5**
Management & Options: **2.6**
Support Materials: **1.5**
Value: **3.5**
Total: **63%**

- *Broderbund Software, 1993*
- *Grades 2+*
- *Science, reading, sequencing*
- *DOS, Windows, Macintosh**
- *DOS version requires DOS 3.3 or higher, hard disk, color monitor, sound card.*
- *Windows version additionally requires Windows 3.1, 4MB RAM.*
- *Macintosh version requires System 6.0.5 or higher, hard disk, color monitor.*
- *$59.95*

dance chart (for example, left arm up, kick right leg, left arm down). By selecting chords or sounds (such as zing or drum) and placing them on a music chart, the child can create music to accompany the dance. Complex sequences can result.

When the secret of the "Spelunx Cave Builder" is discovered, the code in the user's guide can help the child decipher the necessary combination to reposition the three main rooms, add more passageways, and arrange several other strategic options.

The Program Guide offers fairly detailed descriptions of some activities, such as the "Stamp Animator," but *Spelunx* maintains its adventure game quality by keeping other information hidden. *Spelunx*'s engaging user interface—caves, tunnels and hidden secrets—and the expanding complexity of activities such as the "Polka Machine" keep the software intriguing beyond the first few uses. Though the science and language content is more pseudo than real, the animation is complex enough to require some real thinking.

SEE ALSO:

Creature Creator
Face Maker
Sammy's Science House
Bailey's Book House (for word play and rhyming)

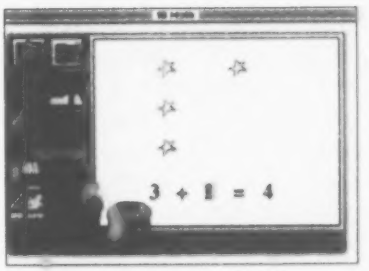
Stickybear's Math Town

Stickybear's Math Town joins a bookshelf of *Stickybear* early-learning software, voice-supported in English and Spanish, to provide practice in basic arithmetic operations (addition, subtraction, division, multiplication). Each of the six levels of difficulty contains a mixture of operations, and the program automatically adjusts the degree of difficulty to each player's perceived abilities.

At level one, graphics provide counting aids for the numerical problems presented and show animated depictions of the solution process (for example, combining three tires and four tires). Word problems appear by the fourth level of play. In early problems, multidigit numbers are entered from left to right (a 1 then a 5 for 15, for example)—a mode considered more natural for early levels since the 15 is perceived as a whole rather than one ten and five ones. Beyond this level, multidigit responses are entered in right-to-left order (by ones, then tens, etc.) In both cases, a cursor box shows which digit is expected. *Math Town* is intended for 5- to 10-year-olds, but the graphics are a bit childish for the upper portion of the age range.

Math Town opens with Stickybear's welcome and automatically moves to the Student List, where log-in instructions are given verbally for previous players as well as new players. The main menu then opens to the Math Town screen, where play begins by clicking on one of six buildings—garage, house, store, market, factory or office—that serve as settings for math practice. Once a building is opened, the interior displays a large, white workspace where problems are presented. As play progresses, the buildings are furnished piece-by-piece with items relevant to the setting (for example, tools, tires, a car, and a mechanic in the garage). In each building, a Home button returns the player to the main menu. A Pointing Hand button, if activated by the teacher in the Teacher's Option menu, allows the child to move directly to the Game segment of the program. A child may take as much time to enter a response as he or she wishes and has the opportunity to change an answer before pressing the return or enter keys. Unlimited response times permit off-line computation or use of manipulatives, but are less effective at encouraging mental math techniques or recall of basic facts. Correct answers are acknowledged by verbal comments such as "Good job" and "Nice job," and incorrect responses are followed by "Try again." If the player continues to respond incorrectly beyond the preset or default limit, the correct answer is both spoken and printed on-screen. A new problem then appears.

Math Town's built-in arcade games provide brief "recesses" between stints of drill and practice. Movement into the game segment



Ratings

Content Strength: **4.1**
User Friendliness: **4.4**
Management & Options: **4.8**
Support Materials: **1.9**
Value: **4.3**
Total: **79%**

- *Optimum Resource, Inc., 1993*
- *Grades K–3+*
- *Math*
- *DOS, Windows, Macintosh**
- *DOS version requires DOS 3.3 or above, color monitor, sound card.*
- *Windows version additionally requires Windows 3.1, 4MB RAM.*
- *Macintosh version requires System 6.0.5 or higher, color monitor.*
- *$59.95*

occurs automatically when a child has completed five sets of problems. For example, in the garage a tire is stacked for every three problems completed. When five tires are stacked, the game begins. Players move Stickybear, who is trying to catch balls in a basket. If he misses, or if a ball hits him before he catches it, he falls down and loses one turn. When all turns are used up, the player is automatically returned to the computation screens. A player may select Pause from the Options menu, or may select the home button to return to the problem-solving segment. If a child moves directly to the Games segment before finishing a series of problems (an option that may be turned off), Stickybear is allowed only one miss before the player is returned to the computation screens.

The record-keeping options, learner-controlled self-pacing, and voice feedback features make *Stickybear's Math Town* very user- and teacher-friendly. Helpful teacher options include the ability to customize levels to match the needs of individual children, to select the types of problems presented (specifying addition or multiplication, for example), to set the number of incorrect responses accepted, and to select either a show-all-work or answer-only response mode.

The program can record and print out each child's starting level, current level of play, number of problems attempted, number of wrong answers, and the percentage of correct answers for the most recent session. These options may be preset, or the child may select and change the level of play at any time. Unfortunately, all Teacher Options are easily accessible to the child, which could lead to inadvertent data loss.

Only the limited background formats and overly accessible Teacher Options detract from this well-designed program. The accompanying manual is also very clear and helpful.

SEE ALSO:
Math Ace
Mental Math Games

Story Tailor: We Bake Gingerbread Folks

Story Tailor is a "mad-lib" story generator and word processor that merges text with children's names and other details to create individualized stories and poems. The text, in this case a version of the classic tale "The Gingerbread Man," can be altered or rewritten at any time. With *Story Tailor*, learners become active participants. Reading, writing, speaking, listening, dramatic play, and revision of literature-based text become uniquely personalized.

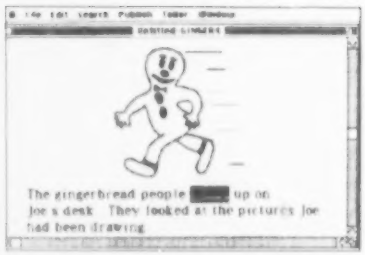
To begin, the teacher enters a list of children's names. Multiple classes of names may be entered. Identifying children's genders allows the program to insert appropriate pronoun references in the text. Information entered about the school further personalizes the resulting stories. Another feature enables names from the class list to be separated into subgroups for small-group work with parts of the story. Options allow addition or deletion of classes or subgroups at any point. The software has both English and Spanish versions, with a simple click of the mouse changing it from one language to the other.

The program also prompts the user to select children's names for specific roles or characters in the text. For example, the program might prompt, "Pick a child who likes to sing," and the name chosen would be inserted in a silly sentence about singing. This whole procedure is very simple and takes only a few seconds.

After the class list and initial subgroups have been entered, the user selects a chapter. A printed copy of all chapters is available in the teacher's manual. The software presents a summary of the chapter and indicates the recommended number of participants and the number of speaking roles required. Clicking on the name of the class or subgroup automatically merges those names into the selection. The generated story or poem can then be saved and printed.

Story Tailor can also generate cloze activities, which center on missing words or parts of words. In these comprehension exercises the reader uses context and meaning to fill in the missing parts. In Automatic Cloze Mode, *Story Tailor* will omit various words or parts of words, replacing them with blank spaces. The user can set the program to omit and replace a single word, every word, every *n*th word, initial letters in a word, or the first vowel in a word. After using automatic mode, the teacher may manually change any inappropriate omissions—a process which can be time-consuming. In this manual mode, the teacher can match the task requirements to specific children and select the deletions. Cloze passages may be completed on screen or may be printed out.

Other tools in *Story Tailor* allow for the placement of drawing frames and clip-art at any point in the text, as well as the removal of



Ratings

Content Strength: 4
User Friendliness: 2.4
Management & Options: 3
Support Materials: 4.3
Value: 2
Total: 64%

- *Humanities Software, 1991*
- *Grades K–3 (with suggestions for use with older learners)*
- *Writing, reading*
- *DOS, Macintosh**
- *DOS version requires DOS 3.1 or higher, hard disk.*
- *Macintosh version requires System 6.0.5 or higher, hard disk.*
- $99

default drawing frames and graphics. The latter is intended to keep distractions at a minimum while students are reading or editing an on-screen selection. Printouts may be done in full-page, booklet, and big-book form.

We Bake Gingerbread Folks is one of three classic tales among the more than 22 stories and poems available for use with the *Story Tailor* program. Titles are purchased separately (the program price of $99 is the cost per title). Each title comes with a copy of the story in book form and a teacher's manual. The manuals provide classroom suggestions for pursuing both group instruction and independent usage.

While *Story Tailor* provides a unique way to personalize reading and writing activities, it doesn't pose much of a challenge to second- and third-graders.

Storybook Weaver

Once upon a time there was a new creative writing tool, and its name was *Storybook Weaver*. Woven into this versatile program are more than 650 pieces of clip-art—characters from folklore (for example, Baba Yaga), cultural items (a sombrero), and a multitude of scenery foregrounds and backgrounds. Stories can be combined with music, making this a multimedia writing experience.

The main menu provides children with five choices: Start a New Story, Finish a Story, Print a Story, Read a Story, or Quit. A sample story provided with the program illustrates many program features and can be added to, printed, or read. A child may start a new story with a title page (entering information in the Title, Author, and Info blocks), or do it later. Choices are available for text color and font. A child can also select one of 11 page borders or create a custom border.

The body of the story starts on page two, where the child is prompted to choose a Text Only or Picture and Text page format. When Picture and Text is selected, the story window is divided for text and illustrations. A Tool Palette provides resources for story composition: tools to add scenery, objects, color, and sound, and to size and flip objects. A speller can insert object names on the story line. Objects are previewed in a box and then dragged to the desired spot on the picture.

The Color button allows an object's color to be changed; the Goodies menu provides the means for changing people's clothing and skin color. The Sound button, which assigns sounds to objects (such as a galloping sound for a horse) is available on any Macintosh, or with appropriate sound cards in the new *Storybook Weaver Deluxe* version for Windows. A related option, found in the Goodies menu, allows users to choose among "scary," "light," "mystery," and other music choices for the beginning and end of stories. Selecting Finish a Story or using the edit menu allows new pages to be added or inserted at any time. Completed stories can be read from the screen or printed.

This program is very easy to use, and thorough explanations are provided in a user's guide. *Storybook Weaver* provides word-processing features comparable to the Learning Company's venerable *Writing and Publishing Center* program. But with the push toward multimedia features such as graphics, animation, sound, and even live video, *Storybook Weaver* is a modest though very qualified member of this class. Its emphasis on bookwriting gives it an edge as a process-writing tool, and it will run even on low-level DOS and Macintosh computers.

SEE ALSO:
My Own Stories
Writing and Publishing Center

Ratings

Content Strength: **4.1**
User Friendliness: **4.2**
Management & Options: **3.4**
Support Materials: **4.4**
Value: **4.5**
Total: **82%**

- *MECC, 1992*
- *Grades 1+*
- *Writing, reading, spatial relationships, creativity*
- *DOS*, Windows, Macintosh*
- *DOS version requires DOS 3.3 or higher, 640K RAM, VGA or MCGA graphics card, 256-color monitor, sound card, hard disk.*
- *Windows version additionally requires Windows 3.1, 4MB RAM.*
- *Macintosh version requires Macintosh Plus or later, System 6.0.7 or later, 1MB RAM for black and white, 2 MB RAM for color, 4 MB RAM for System 7.0.*
- $69

The Tale of Peter Rabbit

Ratings

Content Strength: **4.2**
User Friendliness: **3.8**
Management & Options: **4.7**
Support Materials: **1.1**
Value: **4.7**
Total: **74%**

- *Discis Knowledge Research, Inc., 1993*
- *Ages 3+*
- *Language arts*
- *DOS, Windows, Macintosh®*
- *DOS version requires DOS 3.3 or above, 640K RAM, CD-ROM drive, color monitor, sound card.*
- *Windows version additionally requires Windows 3.1, 4MB RAM.*
- *Macintosh version requires System 6.0.5 or higher, CD-ROM drive, color monitor.*
- *$19.95*

Beatrix Potter's *The Tales of Peter Rabbit* is one in a series of *Kids Can Read* books on CD-ROM from Discis Books. Other titles in the series include Potter's *The Tale of Benjamin Bunny*, *Cinderella*, and several other stories from modern writers available in both Spanish- and English-language versions. The strength of these CD-ROMs is the wide range of options they make available to parents or teachers for adjusting various features affecting the way a child hears or reads the text.

The CD-ROM is introduced to the user by a voice explaining how to get information on the print and picture features. It even explains how to click the mouse to select things on the screen and suggests that users might enjoy exploring options on their own. The Voice Help option comes on as soon as the program starts and can be turned off and on as needed.

The program models a very expressive reading style in male or female adult voices. The reading is accompanied on-screen by the original Potter illustrations, with music and sound effects added. Words are highlighted in phrases as they are read. Children control the pace and direction by single-click, double-click, and press-and-hold mouse actions on individual words, sentences, speaker icons, pictures, and fold-up page corners.

A child can choose to hear individual words, sentences, or the whole story beginning at any point; the child can turn pages forward or backward to look at illustrations or to reread. Additional options, such as word pronunciation by syllables, pronunciation in context, or addition of a word to a recall list, are also available. Program reading can be stopped at any point by clicking anywhere off the print or illustration areas.

Adults can increase or decrease the rate at which the story is read to allow a child to comfortably follow the text. Adults can also choose pronunciation by whole words or by individual syllable. The sequence can also be changed, for example, to give syllable-by-syllable pronunciation before whole-word pronunciation. Parts of speech, pauses, sound effects, and the recall list may be turned on or off; reading volume may be changed; finally, changes may be made in text style, font, size, and line spacing.

Teachers or parents can save settings unique to each user. A handy Oops feature invokes the program's original settings, the settings used at the beginning of the current session, or the settings used the last time the book was opened.

Included are lists of all words in the story sorted alphabetically, by parts of speech, and by frequency of occurrence. Suggestions for pre- and post-testing of vocabulary words are provided and may be printed.

Teachers can use the recall option to identity up to 32 words selected by a child during the reading. A recall list can be erased or saved when the book is closed. Both the recall and customizing options may be hidden during reading.

The accompanying user's manual is very thorough, with a glossary of terms and an index. The diversity of adult options available to adjust the presentation rate of *Peter Rabbit* make it a positive supplement to emergent literacy experience for the pre-reader and beginning reader.

SEE ALSO:

New Kid on the Block

Bravo Books: A Beautiful Feast for a Big King Cat

Thinkin' Things Collection 1

Ratings

Content Strength: 4.7
User Friendliness: 5
Management & Options: 4.1
Support Materials: 4.7
Value: 5
Total: 95%

- *Edmark Corporation, 1993*
- *Music, attributes, patterns, shape, size, motion, creative activity*
- *Grades preK–3*
- *DOS*, Windows, Macintosh*
- *DOS version requires DOS 3.1 or later, 640K RAM, VGA color monitor, hard disk, mouse, sound device.*
- *Windows version additionally requires Windows 3.1, 4MB RAM.*
- *Macintosh version requires System 6.0.5 or higher, hard disk, color monitor.*
- *$69.95*

This open-ended, highly interactive program is easy to use and provides quality educational experiences in the strong tradition of other Edmark programs, such as *Millie's Math House* and *Bailey's Book House*.

The activities explore musical rhythm; pitch and sequence; the logic of attributes and grouping; spatial concepts of size, shape, and change; and cause and effect— topics that are a welcome complement to the more familiar topics in language and numbers covered in other Edmark programs. Music and attribute activities have both Explore and Query modes.

In the "Oranga Banga" activity, children explore musical sounds and compose sound patterns by clicking on Oranga Banga's assortment of instruments. Once created, a sound sequence can be replayed by clicking on Oranga or the Play icon. A Repeat icon allows the child to replay the selection. In the Query mode, children hear and are asked to remember a sequence of sounds produced by Oranga. This activity has an option that allows the child to hear the sequence played by Oranga with the screen darkened, to practice auditory memory skills. In "Toony Loons," a similar activity, children create music by clicking on the keys of four xylophones. In the Query mode, children are asked to repeat patterns (lights on/lights off option also available) played by Toony.

In the "Feathered Friends" activity, children extend initial *ABAB* patterns by selecting attributes for baby birds on an assembly line. Children observe the pattern of the first few birds to help them pick the necessary attributes from selections on a design machine. A blueprint window allows a child to see his or her creation prior to placing it on the assembly line. If a child is not satisfied with the creation, it may be changed by clicking on a different button on the design machine.

In the "Fribble Shop," children must find, on increasingly crowded and distracting display shelves, a Fribble creature with attributes specified by a customer. Users can decide whether Fribble orders are received in oral and/or written ways; these choices are made by clicking on a telephone graphic for oral orders, on the fax machine graphic for print orders, or on the shop door graphic to admit customers with oral or written requests.

Children can explore geometric shapes, motion sequences, and cause and effect while exercising extraordinary creative license in the "Blox Flying Shapes" activity, which allows objects to spin, float, and bounce off walls. Twelve tools allow children to see examples of shape creations; to rotate, spin, or freeze motion; and to change sound effects. Each shape has its own accompanying sound, which changes in volume

and pitch as the shape changes. Shapes are selected and dragged onto the screen, much like the process used in many drawing programs.

"Blox Flying Spheres," a similar activity, allows children to explore perspective and depth by tossing spheres in three-dimensional fields. Options are similar to those in "Blox Flying Shapes," with the added ability to change backgrounds and background colors.

Teacher management and support options are available in an adult section accessible by pressing several keys. Among the options, a sliding scale called the Grow Slides allows adults to adjust the difficulty level for each activity. Otherwise, the level of challenge automatically increases as a child succeeds. A Remember Progress box can be checked to record a child's level and return him or her to that level the next time the program is used.

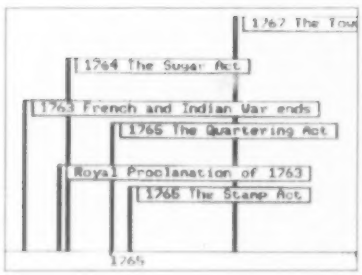
The detailed teacher's manual provides curriculum inclusion ideas and reproducible activity sheets.

The creative, open-ended nature of both these activities will appeal to children of all ages. *Thinkin' Things* is an educationally strong, child-engaging software program. The program is well-constructed for strengthening critical thinking skills in young children.

SEE ALSO:

MetroGnomes' Music

TimeLiner 2.0



Ratings

Content Strength: 4.6
User Friendliness: 4.2
Management & Options: 2
Support Materials: 4.9
Value: 4.5
Total: 82%

- *Tom Snyder Productions, Inc., 1992*
- *Grades 1–3+*
- *Time relationships, sequencing*
- *DOS, Macintosh®*
- *DOS version requires 512K RAM, CGA graphics or better, printer.*
- *Mouse optional.*
- *Macintosh version requires System 6.0.5 or higher, hard disk, printer.*
- $69.95

This open-ended, highly interactive program is easy to use and allows teachers and students to create and print wall-sized time lines. As they gather and sort information to produce time lines of daily or historical events, children work with time relationships, sequencing and ordering of events, and writing skills. The program may be used by kindergartners in teacher-led activities, or it may be used independently by older children. Teachers can use the program to post daily and weekly plans and events, or to present an individual lesson. Like many other products from Tom Snyder Productions, *TimeLiner* works well in a one-computer classroom.

Movement through the program is user-controlled with the mouse and arrow keys, and concise directions are provided on-screen. From the Main menu, a child can choose to make a new time line, load a time line from the disk (the program includes several completed time lines that may be printed as is or altered), merge two time lines, or erase a time line from the disk. To create a new time line, the user must select a time span of one day, one week, one year, or many years from 10,000 B.C. to 10,000 A.D. An individual time line of one day or thousands of years may be many pages in length when printed and may contain numerous events. Time lines can be condensed or expanded, and two fonts allow for large- or small-print formats. Time lines may be saved to the disk.

After a time span for a time line has been selected, users add, delete, or edit events. The sequencing of events is defined by their beginning times. Ending times for events may be entered in the Macintosh version only; this allows the duration of events to be displayed as well as the sequence. On the DOS version, only beginning times are displayed. A particularly helpful feature of the program is that events may be entered in any order; the program automatically places them in chronological order.

The accompanying manual includes a practice activity to familiarize new users with program features. Also included are suggestions for classroom use, reproducible student activity sheets, cooperative learning ideas, and resource materials. *TimeLiner* is a helpful, versatile tool for teachers and students at all grade levels.

Treasure MathStorm!

Treasure MathStorm! is an entertaining math skills sequel to the Learning Company's *Treasure Mountain* program. Users become Super Seekers who must use addition, subtraction, and multiplication to regain the enchanted crown and set things straight on Treasure Mountain. Children work with money values, use place-value relationships, set clocks, sequence numbers, and balance number equations within six activities and six skill levels. Children are free to choose their activity, control the time spent on it, and quit at any time.

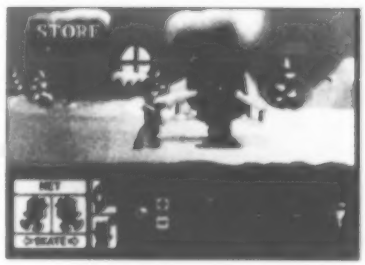
Level of play is saved, so that the next time children use the program they may start again where they left off. The program automatically adjusts to the child's ability level, but levels for individual activities can be preset by an adult or adjusted by the child during play. Answers can be entered by clicking on an on-screen number pad or by using the computer keyboard. Beginning readers will need the help of an adult when using the on-line game and numerous help screens.

Play begins at the Club Sign-In screen, where as many as 15 player names can be listed. Each player is ranked, from trainee to champion, according to the number of treasures collected and saved from previous play. Play begins on one of three concept paths. At the "In-Time Igloo" on the first path, players must change the time on a digital clock to match the time on a cuckoo clock in two tries. In the second path's "Gold Room," players must help Equity, the gold prince, balance the scale by solving equations. In the third path's "Crystal Cave," players must count crystals packaged in groups of ones, tens, and hundreds. Three hundreds and seven ones, for example, must be correctly typed as 307.

Players earn the tools needed to move to the next level in the Game Rooms, where they encounter Gnomes and hunt for treasures. Scenery shifts between the paths and Game Rooms at each level. Each scene contains labeled icons displaying the number of snowballs, nets, treasures available, treasures uncovered, tools accumulated, tools needed, and the amount of moves the player has.

Treasure MathStorm! keeps children actively involved and sprinkles in some math problems and decision making that children may not even notice. The user's guide is thorough and, like other Learning Company manuals, provides instructional guidelines for all program activities.

SEE ALSO:
Math Ace
Mental Math Games
Stickybear's Math Town



Ratings

Content Strength: 5
User Friendliness: 4.6
Management & Options: 3.4
Support Materials: 2.3
Value: 5
Total: 85%

- *Learning Company, 1993*
- *Grades 1–3+*
- *Math skills*
- *DOS, Macintosh**
- *DOS version requires DOS 3.1 or higher, color monitor, hard disk.*
- *Macintosh version requires System 6.0.5 or higher, hard disk, color monitor.*
- *$79.95*

Zoo Keeper

Ratings

Content Strength: 5
User Friendliness: 4.3
Management & Options: 1.7
Support Materials: 2
Value: 4.5
Total: 76%

- *Davidson and Assoc., 1992*
- *Grades 1–3+*
- *Science, social studies*
- *Windows, Macintosh**
- *Windows version requires Windows 3.1, hard disk, 4MB RAM, VGA color monitor, sound card.*
- *Macintosh version requires 4MB RAM, System 7.0 or higher, color monitor, 10MB free hard disk space.*
- $59.95

Zoo Keeper enables children to explore the habitats of 51 animals living in seven climatic regions of the world. In this well-designed and attractive program, players apply reading, thinking, and map-reading skills as they help catch four troublemaking animals who have tampered with the natural homes of other zoo animals.

After each animal's home is put back to its proper state, an item (sunglasses or a map, for example) is added to the player's suitcase. When 10 items have been placed in the suitcase, the player is presented with a zoo keeper award. The child can then help an endangered animal and begin to move up the 18-tier employment ladder at the zoo. The program is learner-controlled and each game is different. Screen layouts are clear and consistent for easy navigation.

To set the animals' homes right, children must recycle garbage, correct humidity and temperature settings, remove improper food supplies, feed animals their proper diets, and plant seeds to ensure that the animals will have enough food in the future. After fixing one home, clues are available to determine where to find the culprits next. At the beginning levels of play, clues are visual; in later levels, they are printed. The troublemakers become progressively more difficult to locate as the child moves up the zoo hierarchy toward the position of Head Zoo Keeper.

To begin, a child must enter his or her name on a Zoo Pass—a step that must be repeated each time a game is played. A single click then moves the player to the Zoo Map, which serves as the Main menu; it shows Zoo Central and the seven regions to visit. The Zoo Map also displays an animal book that may be consulted for more information on the regions and animals, a clipboard with information on each troublemaker, a globe showing the locations of previously released animals, and a walkie-talkie that will tell players where the troublemakers are heading next. Zoo Central contains a listing of zoo locations in the United States and Canada—a useful connection to the outside world. A player may return to Zoo Central for help at any time.

To visit a region, players click on it. Picture icons of all animals living in the region are displayed and the name of each animal appears as the mouse pointer is moved across its icon. With some animals' icons a message is displayed indicating they are not currently available (these become available as a player moves up in rank). Animals that have become extinct are displayed in a sketch with information regarding their extinction.

The child clicks on an animal to visit its home. Each home contains two gauges for setting temperature and humidity. The bottom left-hand corner of the screen shows Zoonie, the robot helper, who may be clicked to obtain information about an animal (such as its diet) or about the climate and plants in its natural environment. This information is needed to properly design and adjust each animal's habitat. Food

supply, climatic conditions, and pollution must be corrected for the animals to appear.

A globe in Zoonie's hand displays the worldwide distribution of the selected animal. A pair of binoculars appearing on the right-hand side of the screen provides close-ups of animals. Clicking on the walkie-talkie displays the location of troublemakers. Just below the walkie-talkie is a picture of the selected animal, and a rolled-up map in the lower right-hand corner returns the child to the Zoo Map, the main menu.

Zoo Keeper's ability to provide new challenges, its potential for teaching children about animals and their environments, and its emphasis on information-gathering and decision-making skills make this a valuable tool for developing environmental awareness.

SEE ALSO:

DinoPark Tycoon
Sammy's Science House

Zurk's Learning Safari

Ratings

Content Strength: **4.6**
User Friendliness: **3.9**
Management & Options: **2.1**
Support Materials: **5**
Value: **4.3**
Total: **80%**

- *Soleil Software, Inc., 1993*
- *Grades preK–K*
- *Patterns, letter recognition, decision-making, animals*
- *Windows, Macintosh**
- *Windows version requires Windows 3.1, 386 processor or higher, 4MB RAM, hard disk, SVGA color monitor (256 colors).*
- *Macintosh version requires 3MB RAM for System 6.0.7, 4MB RAM for System 7.0 or higher, color monitor, 7MB free hard disk space.*
- $65

Zurk's Learning Safari is an open-ended, interactive program with six activities that help children explore the behaviors and habitats of animals living on the African Plains. African music plays in the background of each activity, and the parent's guide provides further information about the music and instruments used. The animation, colorful graphics, voice support, and sound effects are other appealing aspects of this learning adventure.

The child can easily move to any of the six activities by clicking on a picture area in Maya the lion cub's living room. Clicking on the red stop sign in the lower left-hand corner exits the program. Movement through the program is mouse-controlled. In the alphabet activity, the keyboard may also be used to enter letter choices.

Children are the sole decision-makers in the story activity, "Maya's Adventure," which is accessed by clicking on the book Maya's father is reading to her. The story's introduction is read aloud, and it explains that Maya has gotten lost and needs help from various animals to find her way home.

At this point, children are using the mouse to control Maya's movements. Children can also make Maya investigate the animals she encounters on her journey. When the child clicks the mouse button, Maya pokes an inquisitive paw or takes an exploratory sniff. Maya, as a large cursor object, can be hard to manipulate and paint accurately, and finding Maya's path home can be a bit frustrating at first for the child.

Clicking on the kitchen just off the living room moves the child to the "Alphabet Soup" game. The opening screen is a brightly colored placemat decorated with letters at the top and bottom, and a bowl of alphabet soup in the center. The activity begins with the character Zurk diving into the soup. Five letters then appear in the soup, and Zurk moves off to hide in the letter borders. As users (now using an arrow pointer) click on a letter in the soup, the letter's name is spoken. The letter then morphs into an African animal beginning with that letter. The name of the animal is spoken and then it transforms back into the original letter. Then a new letter randomly appears in the soup bowl to replace it.

"Zurk's Puzzles" consists of five animal puzzles for children to piece together as they explore an underlying concept. If a piece is incorrectly placed, it slides off the puzzle for the child to place again. The puzzles introduce concepts like number recognition, identification of body parts, and letter recognition.

"Animal Picture Book" lists the 31 animals found in "Maya's Adventure." The names and pictures are shown in an alphabet book

format, and children click on an animal's picture to hear its name pronounced. Children may navigate forward and backward through the pages at any point by clicking on folded page corners.

In "Hide and Seek," children find animals hidden in the Plains environment or place animals in the environment for another child to discover. Putting an animal in a "transputer" box exchanges one animal for another unknown animal.

The "Zurk's Magic Box" activity displays one of seven shapes when children click on a jack-in-the-box's keyhole. When a shape is selected, the name of the shape is spoken, and Zurk jumps out of the box followed by an example of the selected shape. After some acrobatics with the shape, the shape and Zurk jump back into the box, the key and lock spin, and a new shape appears. If the new shape is selected, these actions are repeated. The child cannot manipulate the shapes, making this the least creative of the activities among Zurk's adventures.

The accompanying parent's guide contains expansion ideas, both on and off the computer, and a supplemental book list. While this program doesn't have teacher options, the discovery-based activities provide ample opportunities for exploration.

Zurk's Learning Safari is appropriate for inclusion in early childhood programs. The program's open-ended nature, child-oriented decision-making components, colorful graphics, and captivating musical accompaniment are sure to please. And the picture-icon navigation is easy for preschool children to use independently.

SEE ALSO:

Busytown
Bailey's Book House
The Backyard
The Playroom

Appendix 1

Descriptions and Ratings for Previously Reviewed Software

Each software description contains the following information:

Title: The program's title

Rating: High/Scope's overall rating based on percents from 1–100.

Age: The publisher's recommended age-range for the users of the program. Many software packages contain more than one game or activity, and the specified age-range takes into account the difficulty levels of all the various games or activities available. We mention in our comments if the publisher's recommended age-range seems inappropriate.

Company: The program's publisher. This is not necessarily the name of a software distributor. The address and phone number of the program publishers are given in Appendix 2: Software Publishers.

Date: The copyright date.

Price: The publisher's list price for the version of the program evaluated. Prices often vary with the type of computer and source of software. If the program is part of the ShareWare distribution system, it will be noted.

Computer: A listing of the computers for which versions of the program are available. A star (*) is placed after any versions used in evaluating the program. Any additional hardware a program requires or can use is listed, such as a speech synthesizer, a mouse, additional memory, a printer.

Apple—Apple II family with at least 48K of memory

IIGS—Apple IIGS specific software. Note that this software will not run on the Apple IIe or IIc computers.

Amiga—Commodore Amiga

Atari—Atari 400, 800, or 1200

Atari ST—Atari ST

C64—Commodore 64

Nintendo—Nintendo

IBM—IBM Personal Computer or compatible with color graphics adapter, IBM PS/2 series, IBM PCjr

Mac—Macintosh

TRS 80—TRS 80 computer

TI—Texas Instruments

If more specific computer information is required, e.g., 3.5-inch disk availability, we make every attempt to list this information in this space. However, it is safest to call the producer directly before ordering. See Appendix 2 for a listing of producers' phone numbers.

Conceptual Areas: A listing, from strongest to weakest, of the conceptual areas present in a program. The letter and number codes refer to the categories and numbered items from the chart given on the next two pages. The letter codes used are these: language (LA), number (NB), classification (CL), time (TI), spatial relations (SP), seriation (SE), creative projects (CP), other topics (OT). The code LA/4, for example, stands for *language, recognizing letters.*

Content: Skills and learning areas covered.

Comments: An overview of the program.

CONCEPTUAL AREAS CHECKLIST

Check the item(s) present in the program:

LANGUAGE (LA)

1 ___ Describing objects events, and relations
2 ___ Describing feelings, one's own and others'
3 ___ Having one's own spoken language written and read aloud
4 ___ Recognizing letters
5 ___ Recognizing words — matching written words
6 ___ Matching sounds and symbols
7 ___ Matching rhyming words
8 ___ Using language to specify actions: sit, run fast, slow, into, toward, etc.
9 ___ Writing stories
10 ___ Following a simple (2- or 3-step) sequence of oral or written directions

NUMBER (NB)

1 ___ Comparing amounts: more, less, same
2 ___ Arranging two sets of symbols in one-to-one correspondence
3 ___ Counting objects; counting by 2s
4 ___ Recognizing numerals
5 ___ Estimating the number of objects
6 ___ Measuring (length) using units
7 ___ Combining groups of objects; taking objects away
8 ___ Recognizing and naming the numerals 1, 2, 3, etc.

CLASSIFICATION (CL)

1 ___ Identifying attributes of things: color, shape, size, function
2 ___ Identifying how things are the same or different; sorting and matching
3 ___ Describing objects in different ways; sorting and re-sorting
4 ___ Identifying attributes an object does not possess; finding the object that does not belong to a set
5 ___ Holding more than one attribute in mind at a time
6 ___ Distinguishing between "all" and "some"

TIME (TI)

1 ___ Stopping and starting an action on signal
2 ___ Observing and describing changes
3 ___ Experiencing and describing different rates of speed
4 ___ Experiencing and describing time intervals — long, short, comparative terms
5 ___ Anticipating future events and making appropriate preparations
6 ___ Identifying the order of a sequence of events; reversing the order of events — before, after, at the same time
7 ___ Comparing the duration of events occurring at the same time — longer, shorter, etc.
8 ___ Using a timer to measure the duration of events
9 ___ Reading time from clocks and watches

SPATIAL RELATIONS (SP)

1 ___ Fitting things together and taking them apart
2 ___ Rearranging and reshaping objects
3 ___ Identifying things from different points of view
4 ___ Experiencing and describing the relative positions, directions, and distances of things — inside, outside, above, below, before, behind, on, under, toward, away
5 ___ Identifying and naming body parts: head, legs, arms, etc.
6 ___ Locating things in the classroom or school on simple maps
7 ___ Interpreting representations of spatial relations in drawings and pictures
8 ___ Distinguishing and describing shapes — circle, square, triangle, doughnut (open & closed shapes)
9 ___ Identifying and reversing spatial order
10 ___ Identifying shapes produced by cuts and folds

SERIATION (SE)

1 ___ Making comparisons — shape, shades of color, pitch, and/or speed
2 ___ Arranging several things in order and describing their relations by size, color, etc.
3 ___ Fitting one ordered set of objects to another through trial and error
4 ___ Inserting objects into an ordered sequence

CREATIVE PROJECTS (CP)

1 ___ Drawing pictures
2 ___ Creating sounds or music
3 ___ Programming
4 ___ Designing, changing, and printing a plan or product

OTHER TOPICS (OT)

1 ___ Practicing memory skills
2 ___ Recognizing and naming the parts of the computer
3 ___ Typing or practicing keyboard skills
4 ___ Making signs, word processing, or keeping records. (Of potential use to preschool and kindergarten teachers.)
5 ___ Nutrition, health, and safety

1-2-3 SEQUENCE ME
Rating: **75** Ages: 5–7
Sunburst Communications, Inc. (1988). $65.00.
Apple*, Mac
TI/2,6 LA/5
Content: *Sequencing skills*

Child sees three pictures or phrases that form an ordered sequence but are placed out of order, e.g., a snowman progressively melting. By putting a 1, 2, or 3 under each box, child restores the pictures to correct order. Some reading required. Works with Muppet Learning Keys or regular keyboard. Text can change between English and French.

A-MAZE-ING MOUSE
Rating: **62** Ages: 5–8
Milliken Publishing Co. (1986). $34.95
Apple
LA/4 SE/4
Content: *Letters, numbers, shapes*

Child uses arrow keys to move a mouse through a 20-screen maze in search of a treasure. Along the way, doors are opened by solving puzzles that involve letters, numbers, or shapes. Offers a nice range of challenges. Comes with 20 printed pages of games and puzzles involving basic skills. Menus require reading. Arrow keys are slow. Games can be saved and played over several sessions. Four levels of difficulty.

ABC's
Rating: **80** Ages: 3–up
Merit Software (1986). $14.95.
Apple* (128K), IBM, C64
CP/1,4 SP/4
Content: *Coloring pictures*

A coloring program with 26 pictures, one per letter (e.g., an acrobat for "a"). Child moves cursor with mouse, joystick, or arrow keys to fill in sections of a picture with 1 of 16 available colors. Prints in color. Mouse and color monitor recommended. Very easy to use. Prints picture with calendar.

ABC-123 ACTIVITIES FOR LEARNING
Rating: **48** Ages: 3–7
Educational Activities, Inc. (1984). $39.95.
Apple*, C64
LA/4
Content: *Matching, alphabetical order*

Two activities on one disk: (1) Copycats —child matches three to five random or teacher-picked words by typing the letters and pressing RETURN. (2) ABC—four activities to teach alphabet order. Reading required.

ACTION/MUSIC
Rating: **80** Ages: 1½–5
P.E.A.L. Software (1985). $150.00.
Apple
LA/8
Content: *Using the computer for speech output*

Designed for severely visually impaired children, this package allows a child to touch a picture and hear a response (Echo speech synthesizer required). Two templates for the Muppet Learning Keys contain 12 sentence parts each, based on action words and music words for sentences like "I want you to help me eat." Intended for use with concrete materials.

ADVENTURES OF DOBOT, THE
Rating: **70** Ages: 3–7
Educational Activities, Inc. (1986). $59.95.
Apple*, IBM, C64
SP/4 CL/2 SE/2 OT/1
Content: *Problem solving, critical thinking*

Seven simple games in which child uses arrow keys to move robot to sort letters, arrange rods according to length, match numerals, and practice with the arrow keys. Management tracks the progress of up to 50 children.

ADVENTURES OF JIMMY JUMPER, THE
Rating: **69** Ages: 2½–5
E.C.S. (1986). $29.95.
Apple
LA/1,8 SP/4
Content: *Prepositional concepts*

A story program of 12 screens. The story is told using an Echo speech synthesizer while the graphics show prepositional concepts. Children use a game paddle or spacebar to advance the story screen-by-screen. A second version is now available.

ALICE IN WONDERLAND
Rating: **69** Ages: 7–12
Queue, Inc. (1985). $39.00.
Apple
LA/5,8 TI/5
Content: *Remembering a sequence of events*

Modeled from the traditional story. Child uses arrow keys and RETURN to select two-word commands to explore Wonderland. How children proceed depends on the options they choose. Requires reading. Could be used as language experience with adult help.

ALPHABET ACADEMY, THE
Rating: **78** Ages: 5–6
Hartley Courseware (1985). $59.95.
Apple
LA/4,5,6 CL/2
Content: *Alphabet sequencing, letter recognition and formation*

Three activities with clear graphics and digitized speech (Echo or Ufonic speech synthesizer needed): (1) Sequencing—part of the alphabet is displayed and sung; child enters next letter. (2) Letter Recognition—a letter is drawn and named; child enters that letter. (3) Letter Formation—a letter is drawn slowly as strokes are described. Options include individualized lessons and upper/lower-case letters.

ALPHABET ARCADE, THE
Rating: **42** Ages: 5–9
Queue, Inc. (1983). $34.95.
Apple*
LA/4
Content: *Alphabetizing, dictionary skills*

Consists of three games in which child puts letters and short words in correct alphabetical order. No branching. Not recommended.

ALPHABET CIRCUS
Rating: **68** Ages: 4–7
DLM (1984). $32.95.
Apple*, IBM, C64
LA/4
Content: *Letter recognition, alphabet order*

Child presses any key to move a hat and presses spacebar to select one of six letter-recognition, alphabetical order, or keyboard-skill activities. Good sound and graphics. Best for age 5. Some reading.

ALPHABET EXPRESS
Rating: **68** Ages: 5–8
Gamco Industries, Inc. (1985). $49.95.
Apple*, C64, TRS 80, IBM (CGA)
LA/4,6
Content: *Alphabet skills*

Child uses spacebar to select one of three letters to fill in an alphabet sequence, match upper/lower-case letters, or indicate the beginning letter for a pictured object (26 pictures in all). Allows control over the number of problems. Keeps up to 200 student records. Rather dry presentation.

ALPAHBET FOR EVERYONE
Rating: **54** Ages: 3–up
Intellimation (1990). $29.00.
Mac (Hypercard 1.2.2)
LA/4
Content: *Letter recognition, alphabet order, letter pronunciation*

A simple letter recognition activity designed for adult literacy students with content also appropriate for the early childhood age-group. User first clicks on a letter from A-Z to select a lesson consisting of two letter-related pictures. The correct letter key must be pressed to see and hear each word. Very narrow range of content and challenge. No management options. Uses clear speech.

ALPHABET FUN:
BIG AND LITTLE LETTERS
Rating: **64** Ages: 5–7
Troll Associates (1991). $39.95.
Apple
LA/4
Content: *Upper/lower-case letters*

Three simple activities on one disk: (1) Fun on Ice—child uses arrows to select from three upper-case letters and match one lower-case letter shown. (2) Sea Pals—child moves seahorse to make lower-case match to upper-case letter shown. (3) Cat Nap—child selects match from three letters of the alphabet shown in sequence. Entertaining graphics. Slow presentation of content.

ALPHABET FUN:
LEARNING THE ALPHABET
Rating: **78** Ages: 5–7
Troll Associates (1991). $39.95.
Apple
LA/4
Content: *Letter recognition, alphabetical order*

Three cleverly designed activities on one disk. Child uses the spacebar, arrows, and RETURN to match letters with corresponding pictures (e.g., Y with yo-yo) or to put a series of letters into alphabetical order. Also includes an alphabet book in which child uses arrows to flip pages. Can be set to use upper/lower-case letters.

ALPHABET RECOGNITION
Rating: **46** Ages: 4–6
Micro Power & Light Company (1986). $24.95.
Apple
LA/4
Content: *Letter recognition, upper/lower-case matching*

Child uses arrow keys to select one of four letters to match a letter carried by a swimming fish. If the match is correct, a point is earned. Can be set for upper or lower case. Limited content.

ALPHABET SOUNDS
Rating: **29** Ages: 5–7
Data Command (1984). $84.95.
Apple
LA/6
Content: *Letter sounds, initial consonants*

Three disks show eight pictures of each letter of the alphabet, one at a time. For vowels, a child must choose long or short (L or S); for consonants, whether the sound comes at the beginning or end (1 or 2). Smile/frown reinforcements. Low level of child-interaction. Not recommended.

ALPHABET ZOO
Rating: **51** Ages: 3–8
Queue, Inc. (1983). $29.95.
Apple*, IBM
LA/4,5
Content: *Letter recognition*

Poor menu design makes maze game difficult to use. Child uses joystick or ESDX keys to move a character through randomly generated mazes. Must find each letter in sequence of a model word given above the maze.

ALPHABETIZATION & LETTER
RECOGNITION
Rating: **67** Ages: 5–13
Milliken Publishing Co. (1980). $75.00.
Apple
LA/4 CL/2
Content: *Alphabetizing, letter discrimination*

First of two-disk Language Arts Series for K–8. Contains 63 levels of alphabetizing drills, from letter discrimination (child presses Y if two letters are the same) to alphabetizing to the seventh letter. Uses sophisticated password and record-keeping system.

ALPHABETIZING
Rating: **55** Ages: 5–up
Aquarius Instructional (1987). $45.00.
Apple
LA/5 CL/2
Content: *Practice putting letters and words in alphabetical order*

Two disks contain 16 worksheet-style alphabetizing activities. Tasks include completing an alphabet, typing in a letter before and after one that is given, rearranging six letters in alphabetical order, and putting pictures or words in order. A timed test asks 20 questions ranging in difficulty and keeps records for up to 50 children. Limited content — presentation is the same with each use. Menus require readin.

ALPHAGET
Rating: **51** Ages: 5–6
Alphaphonics (1982) $50.00.
Apple
LA/4,5
Content: *Letter recognition practice*

Presents simple maze context where child moves "Astro" (using arrow keys) to arrange letters or letter symbols in alphabetical order. Upper/lower-case option available. Effective for practice with alphabetical order.

AMY'S FIRST PRIMER 2.2
Rating: **71** Ages: 4–8
Software Excitement! (1991). $3.00.
IBM
LA/4 NB/3 CL/2 SP/4
Content: *Letters, counting, shapes, and spatial relations*

Six simple activities on one disk allow a child to play an illustrated ABC song, match letters and pictures using the keyboard, draw a line from a picture to the correct letter, count sets of objects from 1 to 9, move a frog through a simple maze using the arrow keys, and create simple shape sets that match a model. An excellent software value for the 3-to-5-year-old age-range.

ANIMAL ALPHABET AND OTHER THINGS
Rating: **81** Ages: 3–6
Queue, Inc. (1986). $39.95.
Apple
LA/1,4,6
Content: *Letter recognition, alphabetical order*

Child presses a key, e.g., A, to see that letter on the screen. Pressing A again causes the letter to turn into an alligator. Pressing spacebar causes the next letter in the alphabet to appear. There are 26 pictures on each side of the disk. Side 1 covers upper case; side 2, lower case. Easy to use.

ANIMAL HOTEL
Rating: **45** Ages: 4–8
Merit Software (1985). $9.95.
Apple*, IBM, C64
OT/1
Content: *Memory skills*

A memory game that shows either three (easy level) or six (hard level) animals and then hides each behind a different door. When shown a door, child selects animal behind that door by pressing a number key. Menu requires reading.

ANIMAL PHOTO FUN
Rating: **70** Ages: 4–8
DLM(1985). $32.95.
Apple
OT/1
Content: *Animals and their habitats*

Six games in which children match animals with their habitats. Includes Animal Concentration and Animal Rummy. Child uses spacebar and RETURN to play with 36 animals from six habitats. Good graphics, sounds. Color monitor recommended.

ANIMATED ALPHABET
Rating: **65** Ages: 3–5
Software Excitement! (1990). $3.00.
IBM (VGA)
LA/4
Content: *Letter recognition*

Child sees object (e.g., a quarter) and is shown the message, "What letter does this start with?" If "Q" is pressed, an animated sequence is shown (in this example, the face on the coin winks). Contains 26 sequences, each one corresponding to a letter of the alphabet. Objects appear in random order. Clever design. Limited content.

ANIMATED MATH
Rating: **71** Ages: 3–6
Software Excitement! (1991). Shareware.
IBM (hard disk and EGA)
NB/3,4,5,6
Content: *Counting, math facts with sums less than 10*

Six rather dry activities provide practice in counting (child sees a set and clicks on numeral); matching numerals with sets; and adding/subtracting with sets of objects and numerals. Give 10 correct answers and go on to six games that include a dot-to-dot puzzle, a music box, and a rocket construction game. Employs clever, simple graphics. No adult options. Uses mouse or keyboard.

ANIMATED MEMORY
Rating: **70** Ages: 5–8
Software Excitement! (1991). Shareware.
IBM (VGA and hard drive)
OT/1 CL/2 TI/2,3
Content: *Matching, memory practice, animation*

A concentration game in which children use the mouse or arrow keys and ENTER to match sets of pictures and earn points. When a successful match is made, the pictures animate themselves. Four levels of difficulty ranging from 8 pictures at the simplest to 34 pictures at the most difficult. Menu requires reading. Includes a clever "Mini Movie Theater" option presenting animated sequences that can be viewed slide by slide, illustrating how animation works.

ANIMATED SHAPES
Rating: **71** Ages: 4–up
Software Excitement! (1990). $3.00.
IBM (VGA and hard drive)
SP/8 CL/2
Content: *Shapes and colors*

Five shapes (square, circle, triangle, rectangle, and hexagon) appear on one side of the screen; 10 color blocks are shown on the other, with a colored shape appearing between. Children use arrows and ENTER to match shapes with colors to be incorporated into a picture. When several matches are made, the picture is cleverly animated. Limited content. Entertaining graphics.

ARITHMETIC CRITTERS
Rating: **78** Ages: 5–7
MECC (1986). $59.00.
Apple (64K)
NB/3,6,7,9
Content: *Counting, addition, and subtraction*

Four well-designed games: adding groups of up to 9, subtracting up to 9 from a group of up to 18, measuring lengths using a worm as units, and counting in groups of 10. Allows teacher modification. Clear sounds and graphics aid the content.

ASTRO'S ABCS
Rating: **62** Ages: 5–6
Alphaphonics (1984). $175.00.
Apple
LA/4,5
Content: *Letter recognition skills*

Consists of seven disks, each covering four letters. Lessons follow fixed sequence, showing alphabet, word pictures, and the letter drawn on the screen. Child then finds letter on keyboard and plays a game with the letter symbols. Child cannot control sequence. Offers effective practice with each letter.

BAKE & TASTE
Rating: **83** Ages: 7–up
MindPlay (1990). ~~$49.99~~.
Apple, IBM (VGA)
TI/6 LA/10 CP/4 OT/5
Content: *Reading skills, following directions*

A cooking simulation activity. Children use spacebar and RETURN to select recipe; find ingredients; measure out ingredients using cups, tablespoons, and teaspoons; set timers on mixers; select appropriate cooking dishes; and set the oven temperature. When the recipe is finished, the product is "tasted" by a group of friends. Errors are then illustrated. Contains 30 simple recipes that can be printed. A fun program.

BALANCING BEAR
Rating: **77** Ages: 5–8
Sunburst Communications, Inc. (1988). $65.00.
Apple*, IBM
NB/1,2,3
Content: *Comparing amounts, additions, problem solving*

Introduction to addition and inequalities. Child selects number or set that will make a scale balance. Can involve sums up to 99. Can use regular keyboard, TouchWindow, or Muppet Learning keys. Includes worksheets and classroom lesson ideas.

BALD-HEADED CHICKEN, THE
Rating: **89** Ages: 5–10
D. C. Heath & Company (1988) $75.00.
Apple (128K)
LA/2,3,5,9 CP/4 SP/4,7
Content: *Language experience*

Children use mouse, Koala Pad, joystick, or arrow keys to select or move objects, backgrounds, words, or characters of a story. They can also add their own words. Resulting stories can be saved and printed in color. Includes four copies of the storybook. Good design. Fun to use.

BANK STREET WRITER III, THE
Rating: **71** Ages: 7–up
Scholastic Software, Inc. (1986). $89.95 ($129.95 for Mac).
Apple*, IBM, Mac
LA/9
Content: *Word processing*

Easy-to-use word processor with large (20-column) text. Effective for writing preschool experience stories. Stories can be saved, printed, and edited. Price also includes small print (40- and 80-column) version with more word processing features.

BARBIE DESIGN STUDIO
Rating: **71** Ages: 6–up
Hi Tech Expressions (1992). $24.95.
IBM
OT/4 CP/4 LA/9
Content: *A design and print program*

A menu-driven printing program that allows the creation of cards, posters, party invitations, banners, and stationery. Also allows printing of an automatically dated diary page, a weekly homework planner, or a month/year calendar. Contains a variety of Barbie (the popular fashion doll) clip art, including 40 borders, 7 fonts, and 44 Barbie poses. Design allows child to see the product as it is being constructed, although menus require reading and some of the commands are complex.

BASE TEN BLOCKS
Rating: **86** Ages: 5–12
The Learning Box (1991). $59.00.
IIGS, Mac (color)
NB/1,2,3,4,5,6,7,8 SP/1,2
Content: *Understanding number patterns*

A range of activities in which children use the mouse to move base ten blocks to illustrate numbers, solve addition and subtraction problems, duplicate mosaic-like patterns, and guess a hidden number. Well designed. Easy to use. Offers a range of options. High in child-control. Can be interfaced with an Appleshare network. An excellent program for grades K–3.

BEGINNING READING SKILLS
Rating: **57** Ages: 3–6
MicroED, Inc. (1986). $89.95.
Amiga (512K)
LA/5,6
Content: *Beginning reading skills*

A four-disk series that presents (using computer voice) a sentence, e.g., "A man ran." Each word of the sentence also appears randomly in one of nine boxes. The child identifies, in order, each word in the sentence by clicking the mouse on the appropriate word box. Contains 1000 words, as hard as "delve" and "gauze."

BERENSTAIN BEARS FUN WITH COLORS, THE
Rating: **86** Ages: 3–9
Compton's NewMedia (1991). $39.95.
IBM (VGA, hard disk)
CP/1,4
Content: *Coloring and creating with stickers*

A 24-page computerized coloring book in which a child can use a mouse (required) to fill in the colors from a 48-color palette. Includes 95 "stickers" and cartoon-style word balloons which can be easily incorporated into a picture. Nineteen of the stickers become animated and move once they are selected. Pictures can be printed or saved. Similar to the Polarware, Inc. programs, but with more features.

BERENSTAIN BEARS JUNIOR JIGSAW, THE
Rating: **71** Ages: 4–7
Compton's NewMedia (1990). $24.95.
IBM
SP/1,2,4,7,9
Content: *Spatial problem solving*

Ten bear pictures which can be divided and scrambled into 8, 15, 40, or 60 even square-shaped parts. The child uses the mouse to click twice—once on the piece selected and next on the new location. A timer keeps track of speed and records the fastest time. Includes pull-down menus that young children will need help using. For a better puzzle program, see "Mickey's Jigsaw Puzzles."

BERENSTAIN BEARS LEARN ABOUT COUNTING, THE
Rating: **76** Ages: 4–7
Compton's NewMedia (1990). $39.95.
IBM (VGA, CGA)
NB/3,4,6,7 SE/1 CL/4
Content: *Counting to 9 and other early math skills*

Eight simple and rather dry activities in which a child matches a set to an illustrated numeral; counts sets; counts parts of a set according to one attribute; uses units to measure a line, selects the larger of two sets; and solves addition and subtraction problems with sets. Adult menu allows nice degree of control over presentation, speech, and scorekeeping options. Feedback employs speech. No speech adapter required.

BERENSTAIN BEARS LEARN ABOUT LETTERS, THE
Rating: **73** Ages: 3–7
Compton's NewMedia (1991). $39.95.
IBM* (CGA, VGA, 2.6MB of hard disk space)
LA/4,5,6
Content: *Letter recognition, alphabet*

Child uses mouse, joystick, or arrows to direct a skateboarding bear through a maze of forest trails. Occasionally, the child must answer a question to pass down a trail (e.g., "What letter does NET start with?") or play one of five letter-recognition games. Limited content. Uses digitized speech. Setup options allow upper/lower-case selection or control over games.

BIG AND SMALL
Rating: **66** Ages: 3–6
Access Unlimited (1988). $25.00.
Apple
SE/1
Content: *Concepts of big and small*

Presents two or three objects of varying size. Child indicates which object is largest (or smallest) by pressing any key when an arrow moves next to that object. Management options allow for control over sound or input method (can also be used with single switch). Designed for handicapped users. Color monitor advised.

BIG BOOK MAKER
Rating: **Not rated** Ages: 6–12
Queue, Inc. (1990). $49.95.
Apple
CP/4 LA/9
Content: *Printing utility program*

A useful printing utility program for creating book pages. Two double-sided disks. Requires the use of layers of word menus and frequent disk swapping; young children will need help. Pages can be saved or printed in color. Contains five fonts and can produce five page sizes, the largest measuring 25 by 33 inches (sheets must be taped together). Art selection includes 237 items and 22 backgrounds based on popular fairy tales.

BIG RED HAT, THE
Rating: **77** Ages: 3–6
Hartley Courseware (1989). $49.95.
Apple
LA/5,6,8
Content: *Short "a" sound and reading comprehension*

Contains 10 lessons on one disk. Each lesson consists of a short story (four to seven paragraphs) and comprehension questions. Child can hear sentences or words with an optional Echo or Ufonic speech synthesizer. Makes use of animated graphics to illustrate stories. Vocabulary builds on the short "a" sound, using C-V-C Dolch words. Includes diagnostic record keeping.

BIG TEXT MACHINE
Rating: **Not rated** Ages: 5–up
Balloon Software (1992). $35.00.
Apple
LA/3,9
Content: *Seeing language in print*

A utility program designed to display any Apple II ProDOS file in large print. Files can also be printed in large print. Contains a range of display options, including four languages, a choice of screen or print colors, upper- or lower-case display, and nine fonts.

BIKE HIKE
Rating: **41** Ages: 4–8
Merit Software (1985). $9.95.
Apple*, IBM, C64
OT/1 NB/3
Content: *Memory, recall of objects*

Child first watches objects pass a bicycle, then uses number keys to select objects from a list shown at the end of the ride. Reading required. Two difficulty levels available. Inflexible design allows little child-control.

BIRD'S EYE VIEW
Rating: **73** Ages: 5–8
Hartley Courseware (1987). $49.95.
Apple*, IBM
SP/3,4 LA/1
Content: *Perspective and positional relationships*

A scene is shown with a bird. Views possibly seen by bird appear in a box. Child uses spacebar to select which view bird sees, based on the bird's location. Other activities allow moving the bird to correspond to a view shown. Management keeps records and allows teacher-control over the presentation.

BOARS TELL TIME, THE
Rating: **68** Ages: 3–7
Queue, Inc. (1987). $39.95.
Apple*, Mac
TI/9 NB/4
Content: *Clock skills*

Three activities: (1) Telling Time—child sees clock and must type in the time shown. (2) Setting the Clock—child sees a digital time and must set the clock hands to match. (3) Time Trials—a faster version of the first activity, keeps score. Clear, colorful graphics. Some reading required.

BODY AWARENESS
Rating: **64** Ages: 3–6
Mindscape, Inc. (1983). $61.00.
Apple
SP/5 LA/5
Content: *Location of body parts*

Three games on body parts. Child selects Y, N, ?, or ESCAPE for each problem. Provides practice with body part locations, names of body parts, and seasonal clothing. Provides performance summary and allows selection for number of rounds, season, and timing of cursor movement. No reading required.

BOUNCY BEE LEARNS LETTERS 1.0
Rating: **72** Ages: 4–8
EduQuest (1985). $54.00.
IBM
LA/4
Content: *Letter recognition*

Four games: Game 1 introduces a letter. Games 2–4 provide practice with the letter in a game context using the spacebar and arrows. Management can track up to 225 children and automatically adjusts difficulty. Independent of "Writing to Read." Speech attachment optional.

BOUNCY BEE LEARNS WORDS 1.0
Rating: **62** Ages: 5–10
EduQuest (1985). $54.00.
IBM
LA/5
Content: *Word knowledge*

Four activities using common words in game context. Child uses arrow keys and spacebar to match words with pictures, pick a word from one or more distractors, or identify a word as it is formed by marching ants. Management system can track 150 children. Menu requires reading. Speech synthesizer is optional.

BOZONS' QUEST
Rating: **78** Ages: 4–up
Laureate Learning Systems (1989). $65.00.
Apple
SP/4 TI/5 NB/3
Content: *Cognitive strategies, left/right skills*

Enjoyable game in which child uses left and right arrows to move creature through a grid. A voice labels each move with the direction "left" or "right" (Echo speech synthesizer required). Points are scored by capturing certain objects and avoiding obstacles. Can be used with variety of input devices, including TouchWindow. For one or two players.

BRAND NEW VIEW, A
Rating: **89** Ages: 5–10
D. C. Heath & Company (1988). $75.00.
Apple (128K)
LA/2,3,5,9 CP/4 SP/4,7
Content: *Language experience*

Children use mouse, Koala Pad, joystick, or arrow keys to select or move objects, backgrounds, words, or characters of a story. They can also add their own words. Resulting stories can be saved and printed in color. Includes four copies of the storybook. Good design. Fun to use.

BRANDON'S BIGBOX
Rating: **51** Ages: 3–7
Software Excitement! (1989). Shareware.
IBM (CGA)
LA/4,5 OT/1 NB/3
Content: *Letter recognition*

Twenty-two simple activities on one disk: matching letters; upper/lower-case matching; counting up to 9; addition facts with sums to 9; flash card word drill (custom words can be entered); matching words; counting by 2s and 4s; and concentration. Rather dry presentation at times. Menu requires adult help. A range of activities at a low price.

BREMEN TOWN MUSICIANS
Rating: **45** Ages: 5–8
Troll Associates (1987). $39.95.
Apple
LA/5,7 SP/4
Content: *Homonyms, context clues, comprehension*

Three games: (1) Rebus—child places pictures on blank lines in text of story to complete the tale. (2) Stepping Stones—child moves along a path, selecting homonyms to earn moves, e.g., "Bremen was weigh/way off." (3) Mystery—child solves rebus puzzle. Best for ages 6 and up. Includes book.

BUILD-A-SCENE
Rating: **84** Ages: 2–up
R. J. Cooper & Associates. (1991). $75.00 (free preview copy).
Apple
TI/2
Content: *Cause and effect*

Child uses single switch, spacebar, or TouchWindow to control activities on a computer screen. In a beach scene, for example, a child can cause a boy to kick a ball. Several of the actions are animated or labeled in digitized speech (Echo required for speech). Four scenes are available: beach, breakfast, party, and zoo. Menu requires adult setup. Approximately 30 actions per scene. Designed for use in special education settings.

BUMBLE GAMES
Rating: **49** Ages: 5–10
The Learning Company (1982). $59.95 (school edition).
Apple
NB/1
Content: *Plotting (x,y) points on a grid*

Six games from easy to hard provide practice for plotting points on grid. Whether or not content is applicable to early childhood is at issue. Menu requires reading. School edition includes curriculum materials.

CAT 'N' MOUSE
Rating: **65** Ages: 5–12
MindPlay (1984). $49.99.
Apple*, IBM
LA/6
Content: *Relational concepts*

A maze game in which child earns points by moving a mouse (with joystick, mouse, or arrow keys) away from a hungry cat and correctly matching homonyms, antonyms, and picture words. Adult can add own words or change other features of the program.

CAVEMAN CLOCKWORK
Rating: **45** Ages: 4–8
BL Educational Software (1988). $39.95.
IBM (VGA)
TI/9
Content: *Time concepts*

Two parts: tutoring and practice. Tutoring describes the rationale for keeping time and illustrates 5-, 10-, 15-, 30-, and 60-minute time units, also showing the syntax for writing time. In the practice component, the child must type in the correct time on the clock shown. Rather dry presentation. Reading required.

CCC INSTRUCTIONAL SYSTEM
Rating: **78** Ages: 5–17
Computer Curriculum Corp. (1989). Starts at $1400.00.
Atari (1040ST) and other customized hardware
LA/1-10, NB/1-8 CL/2 SP/1,4 OT/1,3
Content: *Instructional practice in all curriculum areas*

A networked computer system providing individualized instruction in math, reading, and language arts for K-12. Contains around 2200 hours of instruction. Management system adjusts to student's level and keeps records of progress. Prints individualized worksheets. Quality graphics, sound, and speech. We reviewed only K-1 levels.

CHARLIE BROWN'S 1-2-3'S
Rating **67** Ages: 3–7
Queue, Inc. (1985). $29.95.
Apple
NB/3,4,8
Content: *Numeral recognition, counting*

Child selects a numeral and then uses spacebar or number keys to count out the number. Correct response makes 1 of 16 animated Peanuts scenes appear. Good sound and graphics. Enjoyable program.

CHARLIE BROWN'S ABC'S
Rating: **64** Ages: 3–7
Queue, Inc. (1984). $29.95.
Apple*, IBM, IIGS
LA/4
Content: *Letter recognition & association*

Child presses any letter to see tutorial screen on the letter (letter and picture). Finding and pressing the letter again on the keyboard animates the picture with Peanuts Gang characters. Disk must be turned over to access entire alphabet. Fun to use. Potential starter program. IIGS and IBM version have speech capacity (IBM requires Digispeech Card).

CHILDREN'S SWITCH PROGRESSIONS
Rating: **65** Ages: 2–up
R. J. Cooper & Associates (1987). $75.00 (Free preview copy).
Apple*, IBM
TI/1,6
Content: *Cause and effect, progressions*

Child controls an eight-step animated sequence, such as crossing the street or changing channels on a TV, by using a single switch, the open APPLE key, or a TouchWindow. Use of an Echo speech synthesizer allows instructions to be spoken. Setup options allow control of reaction time and use of sign language (ASL) prompts. Menu requires reading.

CHILDREN'S WRITING & PUBLISHING CENTER
Rating: **86** Ages: 7–up
The Learning Company (1988) $89.95 (school edition).
Apple*, IBM
LA/9 CP/4 OT/4
Content: *Creative writing, creating printed material*

An easy-to-use two-disk program for use by older children or early childhood teachers. Combines word-processing features with a 159-picture graphics library. Picture menus allow user to select fonts (8 available), add pictures, save files on disk, or print (in color, with Imagewriter II). Compatible with "The Print Shop" graphics. Great for teachers.

CHIP 'N' DALE
Rating: **53** Ages: 5–up
Hi Tech Expressions (1988). $14.95.
IBM (CGA or EGA)
TI/1,3,4
Content: *Entertainment*

An arcade-style game in which children use arrows or joystick to move chipmunks through nine screens of obstacles (e.g., dogs, fire balls, and grabbing hands). Each successful screen earns one part for a spaceship, which is completed at the end of the game. Good graphics. Fun game. Slow in loading from disk drive. Limited learning value.

CHUTES AND LADDERS
Rating: **58** Ages: 4–7
GameTek / IJE, Inc. (1988). $11.96.
IBM
NB/3
Content: *Counting*

A computerized version of the Milton Bradley board game. Child first spins a spinner to move a playing piece on a 100-space game board with ladders (which move a player ahead) or chutes (which set a player back). Play is for one to four players, or against the computer. Some technical problems, e.g., no control over sound.

CITY COUNTRY OPPOSITES
Rating: **78** Ages: 3–7
Queue, Inc. (1986). $39.95.
Apple
SE/1 TI/1
Content: *Word meanings through context*

Presents and illustrates 20 antonym pairs. Child uses left and right arrows to alternate between pictures illustrating antonyms, e.g., push/pull. Easy to use. Good level of child-control. Includes scenes from city and country environments. Limited content.

CLOCK WORKS
Rating: **72** Ages: 4–10
Nordic Software, Inc. (1986). $14.95.
Mac
TI/9 NB/3
Content: *Clock-reading skills, units of time*

Contains five clock lessons on analog and digital watches, using time expressions and time units. Prints worksheets to go with lessons. Offers a variety of content and lesson setups. Includes a game, called 4 in a Row, that is a strategy game played against a friend or the computer.

CLUE IN ON PHONICS
Rating: **71** Ages: 5–8
Gamco Industries, Inc. (1989). $49.95.
Apple*, C64, TRS , IBM
LA/4,5,6,7
Content: *Practice with letter sounds*

Child uses spacebar, RETURN, and arrows to move a marker to identify a blend, digraph, or dipthong in a word; to create a word by combining the correct clusters of letters; to move the letter "e" to an appropriate word; or to match vowel sounds. Keeps up to 200 student records. Good scores are rewarded with a chance to play an arcade-style game.

COIN WORKS
Rating: **71** Ages: 4–12
Nordic Software, Inc. (1986). $14.95
(Free preview copy).
Mac
NB/3,7 TI/3,4,5
Content: *Value of coins*

Uses a set of U.S. coins to provide practice counting money, making change, and comparing coin value. For a given coin, child can click mouse to hear computer say value. Teacher options include control over presentation and generation of worksheets. Also includes a game in which child moves mouse to deflect a bouncing ball to earn points.

COLOR 'N' CANVAS
Rating: **91** Ages: 6–up
Wings for Learning (1990). $89.00
(school edition).
IIGS (1 mb)
CP/1,4 SP/4,8 LA/9
Content: *Visual art, drawing, painting, symmetry*

An easy-to-use drawing program with powerful features. Ideal for elementary classrooms. Drawing tools include geometric shapes, cut-and-paste, lines and rays, fill, magnify, and a variety of brush sizes. Allows "mixing" of color elements. Teacher options include adjustment for different grade levels. Text can be added in a range of styles and sizes. Pictures can be printed or saved.

COLOR FIND
Rating: **69** Ages: 2 ½–5
E.C.S. (1985). $19.95.
Apple
CL/2
Content: *Matching colors*

A simple drill-and-practice program on nine colors. When a color fills the screen, child presses correspondingly colored sticker on the keyboard. (Stickers included.) Responses are recorded. Echo speech synthesizer optional to say "press a color."

COLOR ME
Rating: **89** Ages: 3–10
Mindscape, Inc. (1986). $55.00.
Apple*, IBM, C64
CP/1,4 LA/3
Content: *Drawing, creating*

Easy-to-use program. Our youngest children could use this program with success. Requires Koala Pad, mouse, or joystick. Child can draw, select colors, or write. Pictures can be printed in color and saved. Includes book, puppet, and picture disk.

COLORS AND SHAPES
Rating: **76** Ages: 3–6
Hartley Courseware (1984). $45.95.
Apple
CL/1 SE/1
Content: *Color ID, visual discrimination*

Consists of four activities based on matching of shapes and colors. Makes use of picture menus. Options for speed, sound, and three levels of difficulty for each activity, selected by child. Well-designed program.

COMPARISON KITCHEN
Rating: **72** Ages: 4–8
DLM (1985). $32.95.
Apple*, IBM
CL/1,2 SP/8 NB/1
Content: *Compare and categorize pictures*

Six games provide experience matching shapes, colors, and sizes. Child uses spacebar and RETURN to make selections. Menu requires reading. Color monitor recommended.

COMPUTERGARTEN
Rating: **27** Ages: 4–6
Scholastic Software, Inc. (1984). $59.95.
Apple*, C64
OT/1,2,3 LA/4
Content: *Keyboard skills, computer terms*

A workbook set, 4' by 8' keyboard-on-the-floor, teacher's edition, and game disk are designed to teach children keyboard skills, parts of the computer, and programming in LOGO and BASIC. Includes 53 lessons. Ratings apply to software only.

CONCENTRATE!
Rating: **80** Ages: 3–up
Laureate Learning Systems (1988). $95.00.
Apple
OT/1 CL/2 LA/1,5,6
Content: *Short-term memory skills*

A simple game of Concentration, in which 6, 8, or 12 boxes appear face down on the screen. Child uses TouchWindow (optional) to select two boxes with matching words, which computer reads aloud as they are selected (Echo speech synthesizer, optional). Includes 40 words. Adult setup required. Keeps records. For one or two players.

CONSERVATION AND COUNTING
Rating: **71** Ages: 3–6
Hartley Courseware (1985). $45.95.
Apple
NB/1,2,3,4
Content: *Counting skills*

Four games in which child uses spacebar and RETURN to match sets of objects, to match numbers with sets, and to estimate quantities, all with numbers less than 10. Three levels to each game. Child can select own level or activity, using picture menus. Limited teacher options.

CONSONANT CAPERS
Rating: **64** Ages: 5–6
Hartley Courseware (1989). $119.95.
Apple (Echo or Ufonic synthesizer required)
LA/4,5
Content: *Letter and upper/lower-case recognition*

Four disks cover 20 consonant sounds. Each disk contains three tutorial-style activities: typing the initial consonant, matching the consonant with a picture, and choosing the picture with a given consonant. A letter matching game is used for application. Good sounds. Blocky graphics. Rigid design is scripted and leaves little child-control. Includes masters of worksheets.

COSTUME BALL, THE
Rating: **62** Ages: 2–8
DIL, Intl. (1986). $188.00.
Apple, IBM
CL/2 SP/5 OT/1
Content: *Variety of basic skills*

Six disks cover a range of topics, such as hot and cold, sharp and not sharp, occupations, transportation, and other thematic material. Provides simple, but limited, activities. Includes overlays to use with WonderWorker touch tablet (recommended).

COTTON TALES
Rating: **78** Ages: 4–8
MindPlay (1987). $49.99.
Apple*, IBM, Mac
LA/3,4,5,8,9 CP/4
Content: *Word processing, language development*

Child uses spacebar, arrow keys, RETURN and ESCAPE to manipulate menus to select pictures, select words, or type in own words to create stories. Work can be printed. Library contains 192 pictures and 616 words. Up to 168 additional words can be added. Can be used with a color printer.

COTTON'S FIRST FILES
Rating: **77** Ages: 5–up
MindPlay (1988). $49.99.
Apple
CL/2,3,4,5,6 CP/4
Content: *Beginning database management, animals*

Four activities: (1) Peek and Find—child sees animal (e.g., cat) and picks its category. (2) File Hunt—child sees animal and picks which of 10 categories animal is in. (3) Clue Search—child finds animal, using attribute clues. Custom databases (category sets) can be constructed. Instructions spoken with Echo speech synthesizer. Includes 200 animals. Prints "animal data cards."

COUNTERS
Rating: **69** Ages: 3–6
Wings for Learning (1983). $65.00.
Apple
NB/2,3,4
Content: *Counting experiences*

Consists of three counting, addition, and subtraction activities, all with numbers less than 10. Child matches sets of objects one at a time using the spacebar or all at once using a number key. Strong content. Adult help required.

COUNTING AND ORDERING
Rating: **56** Ages: 4–6
Micro Power & Light Company (1986). $29.95.
Apple
NB/3,6
Content: *1–9 counting, numeral recognition*

Contains two games: (1) Crater Jumper—child counts the height of a jump to get a spaceman out of a crater. Enjoyable game. (2) Meteor Shower—two to four numbered meteors pass by the screen. To earn points, child must press the key for the largest of the numbers. Some reading required.

COUNTING CRITTERS 1.0
Rating: **81** Ages: 3–6
MECC (1985). $39.95.
Apple (64K)
NB/3,4,7,8 CL/2
Content: *Counting and early math concepts*

Five games on one disk. Child uses arrow keys and number keys to match numerals from 1–20, match sets with numerals, create a set corresponding to a given numeral, and use numerical order to fill in a dot-to-dot design. Clear graphics and sounds support content. Allows teacher modification.

COUNTRY COMBO
Rating: **26** Ages: 3–6
Micro Power & Light Company (1982). $29.95.
Apple
CL/1,3 CP/4
Content: *Creative experience*

Offers a 25-square grid in which child can place 1 of 37 pieces by (1) selecting the piece and (2) typing the numeral of the location on the grid. Game too hard for young children. Reading required. Clumsy design.

CREATURE CHORUS
Rating: **78** Ages: "Lower cognitive functioning" children and adults
Laureate Learning Systems (1987). $85.00.
Apple
TI/1,2
Content: *Cause and effect, switch use, visual tracking*

Six games on one disk. Child uses a TouchWindow, single switch, or spacebar to cause up to eight creatures to move or make sounds. Each reaction of the child yields a reaction of the critter on the screen. Requires an Echo speech synthesizer. Adult setup is required.

CREATURE CREATOR
Rating: **62** Ages: 4–8
Compton's New Media (1983). $9.95.
Apple*, IBM
TI/6 LA/10
Content: *Pattern matching, programming*

Child chooses parts of monster and makes it dance, or matches the movements of another monster. Child uses spacebar and RETURN to select monster's parts. Monster's movements can be programmed. Some reading required. Similiar in design to "Facemaker." Will not run on the Apple IIGS.

CURIOUS GEORGE GOES SHOPPING
Rating: **65** Ages: 4–8
DLM (1989). $24.95.
Apple (2-sided disk)
CL/2,3,4
Content: *Classifying into categories, such as food, pets*

Includes three classification activities and an interactive story. Child uses the spacebar to indicate when an object belongs, when it is similar, or when it does not belong. Requires some reading. Good graphics, but limited content.

CURIOUS GEORGE IN OUTER SPACE
Rating: **62** Ages: 4–8
DLM (1989). $24.95.
Apple
SE/1 CL/2
Content: *Size comparisons*

A computerized storybook in which Curious George blasts off in a rocket for the moon, where he solves multiple-choice size comparison problems (tall and short, long and short, big and small) to get home. Includes a tutorial. Requires switching disk sides. Reading required. Limited content.

CURIOUS GEORGE VISITS THE LIBRARY
Rating: **59** Ages: 4–8
DLM (1989). $24.95 ($62.00 for lab version).
Apple*, IBM
SP/4
Content: *Position words (up, down, in, out, etc.)*

Child indicates when George is illustrating a position word, matches a position word with a scene, or types the position word illustrated in a scene. Good graphics. Requires simple reading for independent operation. Adult help is required to get started.

DAFFY DUCK, P.I.
Rating: **72** Ages: 6–8
Hi Tech Expressions (1991). $11.95.
IBM (CGA or VGA)
LA/5 TI/3
Content: *Spelling practice*

Child uses arrows or joystick to move a duck around a maze and collect missing letters to words while avoiding hazards (e.g., hunters). Correct matches earn points and advance player to more difficult levels. Includes word-search puzzles. A fun game that effectively combines arcade-style play with spelling concepts.

DELTA DRAWING TODAY
Rating: **81** Ages: 5–8
Power Industries LP (1990). $69.95.
IBM
SP/4 CP/1,3,4
Content: *Drawing, programming concepts*

Offers a creative context in which single commands create pictures (e.g., "D" to draw, "R" to turn right). Each command used in drawing picture is stored as a program, which can be edited. Pictures can be printed or saved. Similar to LOGO computer language.

DESIGNASAURUS
Rating: **57** Ages: 4–up
Compton's New Media (1987). $39.95.
Apple*, IBM, Amiga, C64
CP/4 SP/5 TI/5
Content: *Dinosaurs*

Three dinosaur-related activities on two disks: (1) Build-A-Dinosaur—child creates a dinosaur by combining the head, body, and tail fossils of eight dinosaurs. (2) Walk-A-Dinosaur—child controls a dinosaur as it survives through four ecosystems. (3) Print-A-Dinosaur—prints dinosaur scenes in two sizes. Printer recommended. Requires reading and adult help. *Designasaurus II* for ages 7–14 is also available.

DEVELOPING LANGUAGE SKILLS
Rating: **45** Ages: 3–6
Queue, Inc. (1983). $289.95.
Apple
LA/1 NB/4 SP/5
Content: *Knowledge of words*

Twelve disks (sold separately for $34.95) and picture books, each with 32 words about toys, clothes, food, furniture, animals, transportation, body parts, action words, outside/inside, play, colors, and numbers. Child uses arrows and RETURN to match words with pictures. Keeps records for up to 50 children. Little child-control.

DINO SPELLER
Rating: **63** Ages: 5–7
Troll Associates (1992). $39.95.
Apple
LA/4,5,6
Content: *Alphabetization, letter/word recognition*

Three activities on one disk: (1) Dino Match shows three words starting with the same letter. Child selects the first alphabetically, using spacebar and RETURN. (2) Dino Spell shows a partially spelled word. Child types in missing letter. (3) Dino Dictionary shows an item (e.g., a bed). Child types starting letter. Contains three 26-word lists that can be interchanged with a teacher's menu. Rather dry presentation.

DINOSAUR DAYS PLUS
Rating: **69** Ages: 5–up
Queue, Inc. (1988). $49.95.
Apple*, IBM
CP/4 LA/3,6,9
Content: *Creation of writing and graphics*

Child selects from a variety of clip-art (heads, plants, legs, etc.) to create a dinosaur scene that can be saved or printed in color. Words can be added and pronounced with the Echo speech synthesizer (optional). Our five-year-olds loved the graphics but needed help flipping between the two disks and using written menus.

DINOSAURS
Rating: **65** Ages: 2½–5
Advanced Ideas, Inc. (1984). $39.95 ($34.95 for C64).
Apple*, IBM, C64
CL/1,2
Content: *Reading, math, and memory skills*

Games about six dinosaur breeds include matching an outline to its twin; classifying dinosaurs by what they ate, where they lived; and recognizing their written names. Uses a picture menu. Includes stickers and coloring book.

DINOSAURS ARE FOREVER
Rating: **80** Ages: 3–up
Merit Software (1988). $29.95.
Apple* (128K), IBM, C64
CP/1,4 SP/4
Content: *Coloring pictures*

A coloring program with 26 blank dinosaur pictures on one disk. Child moves cursor with mouse, joystick, or arrow keys to fill in sections of a picture with one of 16 available colors. Prints in color. Mouse and color monitor recommended. Very easy to use. Prints picture with calendar, banner, or message.

DISKOVERY ADDING MACHINE
Rating: **69** Ages: 4–8
Queue, Inc. (1984). $39.95.
Apple
NB/1,3,7,9
Content: *Counting, addition skills*

Three games: (1) Counting—child counts and combines two sets. (2) Number Matching—child counts two uneven sets to determine the greater. (3) Adding Facts—child practices addition problems. Some reading required. Management prints and records child's performance.

DISKOVERY TAKE AWAY ZOO
Rating: **68** Ages: 4–8
Queue, Inc. (1984). $39.95.
Apple
NB/3,4,9
Content: *Counting, subtraction practice*

Three games on one disk. Child uses arrow keys to remove animals from sets, illustrating subtraction problems. Progresses to traditional subtraction drill, using numbers up to 9. Management prints and records child's performance.

DONALD'S ALPHABET CHASE
Rating: **75** Ages: 2–5
Walt Disney Software (1990). $14.95.
Apple*, IBM, C64
LA/4
Content: *Letter recognition, alphabetical order*

A simple letter search game. A scene (e.g., a kitchen) with five hidden letters is shown. The same five letters are displayed in alphabetical order at the top of the screen. When child presses one of the visible letters, the alphabet song plays as the matching hidden letter becomes animated and is captured. Keyboard is somewhat unresponsive at times. Upper-case letters only. Our children liked Donald's entertaining, animated routines.

DR. PEET'S PICTUREWRITER
Rating: **83** Ages: 1½–6
Dr. Peet's Software (1982). $69.95.
Mac
LA/2,3,4,5,6,8 NB/4
Content: *Language, counting*

Three simple language activities. Child selects simple pictures from four scrolling menus to create sentences (e.g., "I love fast vehicles"). As each picture is selected, the word is spoken (AppleTalk). Speech can be customized. Two additional activities allow clicking on a letter (from A to Z), number (from 1 to 10), or picture (e.g., food, vehicles) to see, print, and hear the word. Easy to use.

DR. PEET'S TALK/WRITER
Rating: **79** Ages: 3–7
Hartley Courseware. (1986). $79.95.
Apple
LA/3,4,5,6,7,9 CL/2 CP/4
Content: *Language exploration and skills*

Consists of two disks. Disk 1 includes the ABC song, finding and matching letters, and creating and listening to words. Disk 2 is an easy-to-use talking word processor that says whatever is typed, in robotic voice. Uses large letters. Echo speech synthesizer required. Stories can be saved and printed.

DR. SEUSS FIX-UP THE MIX-UP PUZZLER
Rating: **70** Ages: 4–10
CBS Software (1985). $29.95.
Apple, C64*
SP/1
Content: *Problem solving*

A puzzle program featuring six Dr. Seuss characters. Each puzzle is randomly designed with five difficulties to choose from. More advanced levels use smaller and/or inverted pieces. Compatible with Muppet Learning Keys.

DRAGON TALES
Rating: **87** Ages: 5–9
Josten's Learning Corporation (1991). $21,500 for 5 stations.
Mac LC (CD-ROM fileserver required)
LA/1-10
Content: *Language development*

A comprehensive whole-language English curriculum consisting of 18 five-day units covering basic English sounds. Each unit contains lesson plans and materials for circle time and the computer, art, and listening centers. Includes big books and puppets, along with parent newsletters and activities. Software reads stories, asks comprehension questions, and allows child to write and illustrate own stories. An exciting language curriculum.

DUCKS AHOY!
Rating: **78** Ages: 3–6
Joyce Hakansson Associates (1984). $34.95.
C64 (cartridge)
TI/3,5
Content: *Logical reasoning skills*

A game in which children move a boat through canals to pick up ducks. Timing and selection of the best route to avoid a moving obstacle are required to collect all the ducks. Entertaining music and graphics. Joystick required.

EARLY & ADVANCED SWITCH GAMES
Rating: **75** Ages: 2–up
R. J. Cooper & Associates (1987). $75.00 (Free preview copy).
Apple
CL/2,4 TI/1 SP/4,8 CP/4
Content: *Cause and effect, matching, counting, scanning*

Thirteen clever games. Child uses only single switch or open APPLE key to make noises or visual effects, build a scene, play music, scan, build shapes, count, match shapes and colors, move through a maze, or construct a face that can be printed. Adult setup required. Designed for children with limited motor abilities. Echo speech synthesizer optional. Good child-control.

EARLY CONCEPTS SKILLBUILDER SERIES
Rating: **60** Ages: 3–6
Edmark Corporation (1990). $325.00.
Apple
CL/2 LA/4
Content: *Matching, prepositions, things that do not belong*

Children are directed to find or touch specific items in this multiple-choice-style series. Makes use of TouchWindow and Echo speech synthesizer. Consists of eight lessons that cover 170 words from categories of color, shape, and position. Makes use of clear speech and graphics, although lesson design is rather dry. Content can be altered with the *Edmark LessonMaker* program.

EARLY ELEMENTARY I
Rating: **27** Ages: 4–7
Compu-Tations (1982). $34.95.
Apple*, Atari, IBM
CL/1 NB/4
Content: *Counting and matching*

Presents four activities: Count Shapes, Color Match, Number Drill, and Shape Match. Contains management file and password system. Uses blocky graphics. Presentation can trap child in routines. Not recommended.

EARLY ELEMENTARY II
Rating: **28** Ages: 5–7
Compu-Tations (1981). $34.95.
Apple
LA/4 SP/4 NB/4,8
Content: *Letter recognition, counting*

Contains four games: Upper/Lower-case Match, Alphabet Line, Inside Out, Number Line. Includes management file. No branching. Possible to break the program. Graphics are unclear and sounds are distracting. Not recommended.

EARLY GAMES
Rating: **60** Ages: 2–6
Queue, Inc. (1984). $34.95.
Apple*, IBM (CGA), Mac
CP/1 LA/4 CL/1 NB/3,8
Content: *Counting, letters, and drawing*

Contains nine separate games that are strong in content. Poorly designed menu is easy to use but confusing to children. Successful in providing a variety of activities. Drawing activity pictures can be saved on disk.

EARLY MATH
Rating: **43** Ages: 3–6
MicroED, Inc. (1987). $49.95.
Amiga (512K)
NB/3
Content: *Counting, numerical order, basic skills*

Four programs on one disk: child counts from 1–31 objects and enters the number, completes a three-number sequence, finds the sum of two groups of 0-9 objects, or subtracts with sets of 0-9 objects. Blocky graphics. Provides verbal feedback.

EARLY-ON
Rating: **Not rated** Ages: na
Agency Systems (1990). Starts at $3,995.00.
IBM
OT/4
Content: *Case management and program evaluation*

A computerized planning and record-keeping system designed for child care agencies that must maintain background information and individual plans (such as IEP's) for large numbers of children. Contains a built-in statistical module useful in gathering information for planning activities or measuring children's progress. Builds a goals and objectives library as it is used. Designed for networking among several sites, although a single-user version is available.

EARLY SKILLS
Rating: **61** Ages: 5–7
Hartley Courseware (1986). $49.95.
Apple
CL/2 SE/4
Content: *Shape and word discrimination*

Child uses spacebar to match objects, colors, or words in this simple, matching, two-disk program. Design permits control over many aspects of the content and includes record keeping and automatic progress report. Menu requires reading.

EASY AS ABC
Rating: **80** Ages: 3–6
Queue, Inc. (1984). $39.95.
Apple*, Mac, IBM (CGA)
LA/4,5
Content: *Letter recognition, alphabet order*

Provides five games: Match Letters, Dot-to-Dot, Leapfrog, Lunar Letters, and Honey Hunt. Spacebar, JKIM keys, arrow keys, and joystick make the program easy to use. Can be used with upper/lower-case letters. Reading not required.

EASY COLOR PAINT 3.0
Rating: **84** Ages: 6–up
MECC (1991). $59.95.
Mac
CP/1,4 LA/3,9 SP/4
Content: *Drawing, creation of visual products*

A full-feature drawing program ideal for K–12 art programs. Includes a full range of art techniques (e.g., brush shapes, shading, lines, geometric shapes, and cut and paste). Can be customized for young children, who will need help in using the pull-down menus. Good capacity for adding text. Includes 24 pictures to color. Products can be saved or printed in color. Recommended.

EASY STREET
Rating: **84** Ages: 4–8
MindPlay (1988). $49.99.
Apple*, IBM, Mac, IIGS
CL/2,3 SP/4,8 LA/4,5 NB/2,3 TI/3
Content: *Classification, matching, and counting*

Using arrow keys, joystick, or mouse, child moves a boy down a street past various storefronts in search of special objects. "Challenge Upgrade" feature offers a wide range of challenges. Optional speech synthesis makes the program easier to use (Echo speech synthesizer). Enjoyable program.

EDMARK LESSONMAKER
Rating: **Not rated** Ages: na
Edmark Corporation (1990). $199.95.
Apple
OT/4
Content: *A utility program*

A program for teachers that allows them to create multiple-choice lessons. Designed to work with the TouchWindow and the Echo speech synthesizer. See *Early Concepts SkillBuilder Series* and *Vocabulary SkillBuilder Series* for examples of lessons that can be designed with this program.

ELECTRIC COMPANY: BAGASAURUS
Rating: **59** Ages: 6–9
Hi Tech Expressions (1988). $9.95.
Apple (128K)*, IBM, C64
LA/7,8,9
Content: *Vocabulary development and word recognition*

Child uses joystick (recommended) or arrow keys to move a walking dinosaur to select words or pictures that best answer a word puzzle, e.g., Where can a plant grow? Offers a nice range of questions (100) and background scenes (13). No escape from activities. Somewhat hard to control with the arrow keys.

ELECTRIC COMPANY: PICTURE PLACE
Rating: **58** Ages: 5–9
Hi Tech Expressions (1988). $9.95.
Apple* (128K), IBM, C64
CP/1 LA/6
Content: *Develop vocabulary and word recognition*

Child uses arrow keys or joystick to select word (e.g., dog) and move it into a scene. Pressing RETURN replaces the word with a picture. Resulting scenes can be saved but not printed. Has six backgrounds and 193 word/pictures. Word menus and blocky graphics limit this program's value.

ELECTRIC COMPANY: ROLL-A-WORD
Rating: **44** Ages: 5–9
Hi Tech Expressions (1988). $9.95.
Apple (128K)*, IBM, C64
LA/8
Content: *Word recognition, vowel sounds*

Child sees picture, incomplete sentence, and part of a word. Correctly completing the word (by typing missing letters) causes the word to move into the sentence. Possibility of creating nonsense sentences makes this confusing. Contains 90 word/picture combinations. Menus require reading, which limits child-control. No escape from activities.

ELECTRONIC BUILDER
Rating: **82** Ages: 3–5
Mobius Corporation (1990).
See *KidWare 2*.
IBM
CP/4 SP/1,2,8
Content: *Shapes, spatial thinking*

Child uses mouse to select one of five shape icons and then place shapes on screen to create block designs. Pictures can be filled with color (five colors available). High in child-control; limited in options and design. (For example, once shapes are placed, they cannot be retrieved.) Some teacher options. Pictures can be saved or printed.

ELECTRONIC EASEL
Rating: **73** Ages: 3–5
Mobius Corporation (1990).
See *KidWare 2*.
IBM
CP/1 SP/7
Content: *Drawing pictures*

Child moves finger on PowerPad (a large touch-tablet) to draw on screen. Eight colors available. Pictures can be saved or printed. Instructions are spoken. Our children were frustrated by the Power Pad's unresponsiveness to their touch. Resulting pictures appeared blotchy. See *KidWare 2*.

EMERGING LITERACY PROGRAM
Rating: **89** Ages: 5–6
Jostens Learning Corporation (1991). $8,000.
Apple*, IBM, Mac LC
LA/3,8,9 NB/3 SP/1,3,4 CL/3 CP/1,4
Content: *Language, independence, prediction, etc.*

Includes 50 programs for language and math, each with cassette tapes, books, and toys that relate to themes such as "Little Red Hen" and "The Circle Game." Software is similar in design to the Explore-a-Story series. Speech is employed. Ratings apply to software only. Several titles are available in Spanish.

ESL WRITER
Rating: **79** Ages: 6–up
Scholastic Software, Inc. (1989). $99.95.
Apple
LA/9 CP/4 OT/4
Content: *Word processing*

A two-disk word processor for native speakers of Spanish or Asian languages. Contains a spell-checker designed to find common spelling errors made by English-learning students. Designed so corrections are made as words are typed. Uses 40- or 80-column text. Documents are limited to two pages in length. Well-designed.

ESTIMATION
Rating: **78** Ages: 4–6
Lawrence Hall of Science (1984). $34.95.
Apple
TI/1,3,4 NB/5,6
Content: *Estimation of length, area, & time units*

Offers three activities with estimation skills: (1) Choo-Choo—child guesses when a train is over an arrow by pressing spacebar. (2) Junk Jar—child estimates area. Bugs—presents units of "bugs" for child to estimate a line's length.

EXPLORATORY PLAY
Rating: **71** Ages: 1 ½–3
P.E.A.L. Software (1985). $150.00.
Apple (64K)
LA/1,5 SP/7
Content: Early language acquisition

Provides two overlays for the Muppet Learning Keys (required). Child first plays with real toys, then presses their pictures on the overlay to hear the associated words in a robotic voice. (Toy kit purchased separately for $54.) Requires Echo speech synthesizer. Covers 24 words. Adult setup required.

EXPLORING MEASUREMENT, TIME, & MONEY
Rating: **86** Ages: 5–7
EduQuest (1989). $148.00.
IBM (3.5")
TI/9 NB/3,6 SP/4 SE/1
Content: *Units of time, measurement, and money*

Consists of three units: Measurement (rulers and bar graphs), Time (clocks and ordering events), and Money (units of money). Each unit consists of several activities that vary in degree of structure. All require mouse. Clear graphics and speech (IBM speech attachment required). Can track progress or keep records if used with IBM network.

EXTRATELETACTOGRAPH, THE
Rating: **73** Ages: 4–12
DIL International (1986). $69.95.
IBM, Apple II+ or IIe* (not IIc)
CP/1,4 LA/3
Content: *Drawing and writing stories*

A drawing and writing program. Child touches graphic tablet with overlay (requires WonderWorker) to draw or to change colors. Text can be added to the picture. Work can be saved and printed. Includes supplementary materials.

EZ PLAY
Rating: **83** Ages: 2–up
Jumpstart Software (1992). $39.95.
IBM (HD)
OT/6
Content: *Picture-menu system designed to protect computer files*

A picture-menu system for IBM-compatible computers that gives children access to selected programs on a hard disk. Each available program is represented by a miniaturized screen sample. Displays up to nine programs per screen. Child uses mouse, arrow, and ENTER to select programs. A two-level password system allows creation of two sets of icons (one for a teacher or older child, for example). Flexibly designed. See *KidDesk* for a similar kind of program.

FACEMAKER GOLDEN EDITION
Rating: **75** Ages: 3–8
Queue, Inc. (1986). $39.95.
Apple*, IBM (CGA, 3.5")
SP/5 CP/3,4 LA/4,9 OT/1
Content: *Creativity, memory, and concentration*

Child uses spacebar to select features for a face (eyes, ears, nose, mouth, hair) as well as a body, hats, or glasses. Face can then be programmed to move or be used in a memory game. It can then be printed along with up to 1/2 page of text. Difficult for 3-year-olds to operate. A fun program.

FAIRY TALE FACTORY
Rating: **78** Ages: 6–up
Hi Tech Expressions (1992). $24.95.
IBM
CP/4 LA/3,6
Content: *Creating and printing stories*

Allows creation of fairy-tale scenes. Child uses mouse and word menus to choose from 21 backgrounds and a large number of theme-related objects. Once an object is selected, it can be pasted onto a background. Text can be incorporated into the scene. A word processor option allows the writing of stories in a separate space. All text can be spoken (Echo required for speech). Menus require reading and adult assistance. Current titles are *Peter Pan, Robin Hood, The Little Mermaid,* and *Beauty and the Beast.*

FARM, THE
Rating: **80** Ages: 3–5
Mobius Corporation (1990).
See *KidWare 2.*
IBM
CP/1 SP/4,6
Content: *Creation of a "microworld"*

Child uses mouse to select people, animals, or farm objects and paste them into a farm scene. Contains 12 animals with sounds, 24 people representing three generations and various ethnic groups, and 9 farm objects. Resulting scenes can be printed or saved. Rather limited design (only one scene). While children initially like the graphics, they frequently become frustrated by the operation.

FIREHOUSE RESCUE
Rating: **72** Ages: 3–8
GameTek/IJE, Inc. (1988). $9.95.
Apple, IBM*, C64
SP/4,7 TI/8
Content: *Maze navigation*

Child uses arrow keys or joystick (optional) to steer a Fisher-Price fire truck through a maze to rescue people from buildings. Contains seven levels of difficulty. Harder levels make use of multiscreen mazes, finding hidden keys, and racing against a clock to get to a burning building. Enjoyable activity but limited in educational value.

FIRST "R": KINDERGARTEN, THE
Rating: **74** Ages: 5–8
Milliken Publishing Co. (1987). $95.00.
Apple
LA/4,5,6
Content: *Letter recognition; initial, ending sounds of words*

Four activities—child types the first or last letter of a given word, selects letter to complete a word, selects a picture that goes with a partial word, or sees a partial word and picture and selects missing letter. Keeps records. Includes alphabet and tutorial disks, an alphabet book, and classroom materials.

FIRST LETTER FUN
Rating: **82** Ages: 3–6
MECC (1985). $59.00.
Apple (64K)
LA/1,4,6
Content: *Letter Recognition*

Four picture stories: Farm, Circus, Park, and Magic Show introduce all the letters except Q and X. Child sees an object from a story and must use the spacebar or arrow keys to select its initial letter. Teacher options allow selection of upper/lower-case display. Clear graphics. Good design.

FIRST VERBS
Rating: **73** Ages: 4–up
Laureate Learning Systems (1989)
$200.00.
IIGS*, Apple, IBM
LA/5,8
Content: *Learning 40 common verbs*

Designed for children with language delays. Presents 40 verbs, such as "pet" or "wave." Children first hear and see the verb, then move on to matching the spoken verb (requires Echo speech synthesizer) with corresponding illustration. Adult setup required. Can be used with single switch or TouchWindow. Clear graphics and sound.

FIRSTWRITER
Rating: **76** Ages: 5–8
Houghton Mifflin Co. (1988). $117.00.
Apple
LA/1,3,4,5,6,9 CP/4
Content: *Creative writing*

A large-letter word processor with features that include spoken instructions (Echo speech synthesizer optional), choice of five colors for text, a built-in dictionary, 125 pictures. Stories can be saved or printed in color. Words can be added to the dictionary. Print is somewhat blocky.

FISH DISH, THE
Rating: **77** Ages: 3–6
Hartley Courseware (1989). $49.95.
Apple
LA/5,6,8
Content: *Short "i" sound and comprehension*

Contains 16 lessons on two disks. Each lesson consists of a short story (4 to 7 paragraphs) and comprehension questions. Child can hear sentences or words with an optional Echo or Ufonic synthesizer. Uses animated graphics to illustrate stories. Vocabulary builds on the short "i" sound, using C-V-C words from Dolch lists. Includes diagnostic record keeping.

FISH SCALES
Rating: **78** Ages: 4–8
DLM (1985). $32.95.
Apple
NB/1,3,4,6
Content: *Measurement*

Six games in which child uses spacebar, arrow keys, or RETURN to input answers, e.g., the height of a fish jump, the longest or shortest fish, and other measurement concepts. Games encourage the use of units of measurement. Menu requires reading.

FLODD, THE BAD GUY
Rating: **70** Ages: 2–6
Tom Snyder Productions, Inc. (1988).
$44.95.
Apple*, IBM, Mac, IIGS
LA/3,4,5
Content: *Letter and word recognition, reading stories*

Child and adult read through a fairy-tale-like story, pressing any key to change the screen. Every five or six pages, a choice is offered, e.g., to go into a cave or not. Reading required for independent use, although clever graphics and sounds help to guide child through the story.

FUN FLYER
Rating: **64** Ages: 3–8
GameTek/IJE, Inc. (1990). $14.95.
IBM (5.25"), CGA, 256K
SP/4 TI/3
Content: *Eye-hand coordination, directional concepts*

Child uses joystick or arrow keys to steer a plane over a moving landscape. Points and fuel are earned by catching falling stars, snowflakes, kites, and balloons. Three levels of difficulty. Some adult assistance is required to get started. Simple, enjoyable game. Limited child-control.

FUN FROM A TO Z
Rating: **81** Ages: 3–6
MECC (1985). $39.95.
Apple (64K)
LA/4
Content: *Alphabet skills practice*

Child uses arrow keys to play three games: (1) Birds—child matches letters. (2) Dots—child completes a dot-to-dot picture by selecting next alphabet letter. (3) Runners—child sees sequence (K,L,M, _,O) and must select missing letter. Management allows selection of upper/lower case. Well-designed.

FUN ON THE FARM
Rating: **80** Ages: 3–up
Merit Software (1986). $14.95.
Apple* (128K), IBM, C64
CP/1,4 SP/4
Content: *Coloring pictures*

A coloring program with 30 blank farm scenes. Child moves cursor with mouse, joystick, or arrow keys to fill in sections of a picture with 1 of 16 available colors. Prints in color. Mouse and color monitor recommended. Very easy to use. Prints picture with calendar.

FUN WITH COLORS
Rating: **66** Ages: 3–6
Access Unlimited (1989). $25.00.
Apple
CL/1,2 SP/2,4 CP/4
Content: *Color recognition*

For special education settings. Five simple games in which child uses spacebar and RETURN to match colored blocks, fill the screen with 1 of 16 colors, fill the screen with colored blocks, or draw a picture with the arrow keys. Child can also build with colored blocks, using the arrow keys. Color monitor required.

FUN WITH DIRECTIONS
Rating: **62** Ages: 3–6
Mindscape, Inc. (1984). $61.00.
Apple
SP/4 TI/6
Content: *Eye-hand coordination, directional concepts*

Child uses joystick or arrow keys to steer a plane over a moving landscape. Points and fuel are earned by catching falling stars, snowflakes, kites, and balloons. Three levels of difficulty. Some adult assistance is required to get started. Simple, enjoyable game. Limited child-control.

FUN WITH DRAWING
Rating: **71** Ages: 3–up
Wescott Software (1989). $20.00.
IBM
CP/1 SP/4
Content: *Drawing pictures*

A drawing program. Child uses arrow keys to draw simple pictures made up of different shapes (15 colors, 19 shapes to choose from). Pictures can be saved or printed. Use of arrow keys (rather than mouse or joystick) makes drawing difficult.

FUN WITH LETTERS AND WORDS
Rating: **76** Ages: 2–6
Wescott Software (1987). $20.00.
IBM
LA/4,5
Content: *Letter recognition*

Child can press any letter key to see a picture and word related to the letter, e.g., a bike for B. Six levels allow the addition of more words, with up to 147 possible. "Custom" words, such as a child's name, can be added. Will say each letter if used with a Covox Speech Adapter (optional).

FUN WITH MEMORY
Rating: **77** Ages: 2–6
Wescott Software (1987). $20.00.
IBM
OT/1 LA/4,5 NB/4 CL/2
Content: *Memory*

A seven-level Concentration game in which child uses the arrow keys, spacebar and ENTER to select a card. Child can match numerals, objects, or words. Options allow for control over the number of cards shown in a game. Can be played by one or two players.

FUN WITH NUMBERS
Rating: **70** Ages: 3–7
Wescott Software (1987). $20.00.
IBM
NB/3,4,8
Content: *Numeral recognition, adding and subtracting*

Six games provide experiences in counting by twos, adding with objects, or subtracting, all with sums less than 18. Nine skill levels determine the difficulty of the game. Adult options permit control over the difficulty level and pacing of the game. Rather dry presentation. Has speech capability with Echo or IBM speech adapters.

GARDEN, THE
Rating: **62** Ages: 2–8
DIL International (1986). $289.00.
IBM, Apple*
CL/1,2 SP/7 TI/6 OT/1
Content: *Functional intelligence, social skills*

Ten disks cover a range of topics, such as seasons, parts of a flower, pollination, and other thematic material. Child presses overlay on WonderWorker touch tablet (recommended) to select answers. Provides simple but limited activities.

GERTRUDE'S SECRETS
Rating: **84** Ages: 4–10
The Learning Company (1982). $59.95 (school edition).
Apple*, IBM*, C64 ($29.95)
CL/1,5 SP/4
Content: *Classifying and seriating*

Consists of seven attribute puzzles of varying difficulty. Child uses arrow keys or joystick to move through 25 rooms (screens). Children as young as age three can do easiest puzzle, but lose interest quickly. Content is best for ages five and up. School edition contains additional curriculum materials.

GETTING READY TO READ AND ADD
Rating: **63** Ages: 3–6
Sunburst Communications, Inc. (1984). $65.00.
Apple, IBM*
LA/4 CL/2 NB/3,4
Content: *Numerals, upper/lower-case letters*

Six activities based on a matching format. Practice with shapes, letters, and numerals. Child presses any key when a match is shown for shapes, letters, and numerals. Options included for control of speed and number of problems.

GINGERBREAD MAN, THE
Rating: **54** Ages: 5–8
Intellimation (1992). $62.00.
Mac (8.3MB Hypercard Program)
LA/5 SP/4,7
Content: *Development of language skills*

An 18-page Hypercard version of the classic story, The Gingerbread Man. By clicking on buttons to turn pages, a child can hear narration, along with sound effects and music. Other options allow the child to earn points by finding hidden objects or to hear words by clicking on items on each page. An "alpha" version that was reviewed still contained some bugs. Current design is sluggish, limiting child-control and making it difficult to get in and out of activities.

GOOFY'S RAILWAY EXPRESS
Rating: **62** Ages: 2–5
Walt Disney Software (1990). $14.95.
IBM, C64
SP/8 TI/4
Content: *Noticing common shapes*

One simple activity. As a train moves, basic shapes periodically appear above its smokestack. If the spacebar is pressed while a shape is shown, a shape-related object appears in the passing scenery (e.g., a yellow circle causes a round sun to shine). Engaging graphics. Very limited content. Poor design leaves little for children to do.

GRADY PROFILE—PORTFOLIO-BASED ASSESSMENT
Rating: **Not rated** Ages: na
Intellimation (1991). $24.95.
Apple
SP/2
Content: *Anecdotal assessment tool*

Using a microphone and a scanner (optional), adults can capture samples of a child's voice (e.g., reading skills) and record writing samples or photographs.

GRANDMA'S HOUSE
Rating: **68** Ages: 4–8
Queue, Inc. (1983). $24.95.
Apple*
SP/2
Content: *Exploring and arranging*

Child uses mouse or joystick (required) to move to and explore one of six different scenes. By pressing key, objects (e.g., a fish from the seashore) can be carried from scenes and collected in "Grandma's House." Easy to use but not strong in any content area.

GREAT GONZO IN WORDRIDER, THE
Rating: **73** Ages: 6–up
Joyce Hakansson Associates (1985). $19.95.
Apple
TI/1,3,5 SP/2 LA/8
Content: *Fun with words, timing, and strategy*

An adventure game in which child uses joystick (recommended) or arrow keys to move Gonzo through obstacles to earn points and rescue a chicken. On the way, Gonzo constructs machines that will get him through the dangers. An enjoyable program. Includes a Muppet storybook.

GREAT LEAP, A
Rating: **89** Ages: 5–10
D. C. Heath & Company (1988). $75.00.
Apple (128K)
LA/1,2,3,5,8,9 SP/4,7 CP/1,4
Content: *Language experience*

Children use mouse, Koala Pad, joystick, or arrow keys to select and move objects, words, or characters in a story. Children can also type their own words. Stories can be saved and printed in color. Package includes four copies of storybook. Colorful graphics, good child-control. Mouse recommended.

HEY DIDDLE
Rating: **47** Ages: 3–10
Queue, Inc. (1983). $24.95.
Apple*
LA/7,9
Content: *Rhyming words and phrases*

Three activities based on 30 classic nursery rhymes. The first two activities illustrate rhymes as they're being read by an adult. In the third, rhyming phrases are scrambled, and the child must put them in correct order. Joystick optional. Reading required. Not recommended.

HOBO'S LUCK
Rating: **54** Ages: 5–up
Strawberry Hill Software (1985). $55.00.
Apple*, C64
NB/1,3,4,6 SP/2
Content: *Counting and probability*

A computerized board game in which one to four players take turns rolling dice to earn jumps. The first one reaching the end of the course wins a bag of money. Includes 13 worksheet activities for practice in probability, counting, and statistical recording.

HODGE PODGE
Rating: **51** Ages: 1 ½–6
Artworx (1982). $14.95.
Apple*, C64, IBM, Atari
LA/4
Content: *Letter recognition*

Child presses any key to get a response: a picture, a song, or both. Screen displays are blocky and not always appropriate for the letter pressed, e.g., P = Prism. Easy to use program, but its value is limited.

HOLIDAYS & SEASONS
Rating: **80** Ages: 3–up
Merit Software (1988). $29.95.
Apple* (128K), IBM, C64
CP/1,4 SP/4
Content: *Coloring pictures*

A coloring program with 30 seasonal pictures on one disk. Child moves cursor with mouse, joystick, or arrow keys to fill in sections of a picture with 1 of 16 available colors. Prints in color. Mouse and color monitor recommended. Very easy to use. Prints picture with calendar, banner, or message.

HOME ROW
Rating: **75** Ages: 6–up
Hartley Courseware (1987). $49.95.
Apple
OT/3
Content: *Keyboarding skills (touch-typing)*

Has 39 levels of difficulty, ranging from work with two keys to work with the entire keyboard. Typist races against a moving line to score points, see graphics, and advance in levels. Custom lessons can be designed. Keeps up to 50 records. A well-designed program.

HOP TO IT !
Rating: **80** Ages: 5–7
Sunburst Communications, Inc. (1990). $65.00.
Apple
NB/3,7,8
Content: *Number lines, addition and subtraction*

Seven number line activities in which child uses spacebar, number keys, or arrows to move a marker (e.g., a rabbit) on a number line to collect items and complete an addition or subtraction number sentence. Teacher options allow control over many aspects of the presentation. Performance can be printed. Some reading required. Highly recommended for K–3 classrooms.

HUMAN BEING MACHINE, THE
Rating: **78** Ages: 3–up
R. J. Cooper & Associates (1990). $75.00 (Free preview copy).
Apple
SP/5 CP/2
Content: *Recreation, body parts, sequencing, scanning*

Child uses keyboard, TouchWindow, or single switch to select the elements for a face or a body. Resulting products can be printed. Options allow for control over scanning speed or input device. Use of Echo speech synthesizer allows instructions to be spoken. Designed for children with limited motor abilities. Menu requires reading. An enjoyable program.

I CAN COUNT
Rating: **40** Ages: 5–8
Troll Associates (1987). $39.95.
Apple
NB/2,3,4,8
Content: *Counting up to 10*

Eight activities based around counting, matching numbers with sets, typing the number that comes next, finding a missing number in a sequence, recognizing zero, and concepts of greater or less than. Colorful graphics but poor design. Reading is required.

I CAN COUNT THE PETALS OF A FLOWER
Rating: **56** Ages: 3–5
Mobius Corporation (1990).
See *KidWare 2*.
IBM
NB/3
Content: *Counting*

Children click the mouse button to see the petals counted on one of nine available flowers. One flower is offered for each number, giving children practice counting from one to nine. Scripted design and narrow range of challenge cause children to lose interest quickly. Poorly designed. Pictures are taken from the book of the same title.

I CAN REMEMBER
Rating: **64** Ages: 3–8
GameTek/IJE, Inc. (1988). $9.95.
Apple, IBM*, C64
OT/1 SP/7
Content: *Memory skills*

A concentration game. Child uses arrow keys and spacebar to find and match hidden Fisher-Price toys and earn points. Three levels of difficulty are available—a child can choose from a 6-, 8-, or 12-box grid. Can utilize joystick (optional). For one or two players. Color monitor recommended.

I LOVE YOU IN THE SKY, BUTTERFLY
Rating: **89** Ages: 3–7
Hartley Courseware (1990). $297.00 per unit.
Apple*, IBM
LA/3,8,9 NB/3 SP/1,2,4 CP/1,4
Content: *Language experience, thematic material*

Consists of nine units—animals, homes, families, patterns, feelings, self-concept, holidays, senses, and a teacher tool kit. Each unit contains two books, two audiotapes, two videotapes, five story disks, and a student disk. Software is easy to use and is similar in design to the Explore-a-Story series. (See "Rosie the Counting Rabbit.")

IEP GENERATOR VERSION 5.0
Rating: **Not rated** Ages: na
Ebsco Curriculum Materials (1984). $84.95.
Apple*, IBM
OT/4
Content: *Generation of IEP forms*

A program teachers can use to create, store, and print children's Individual Educational Profile (IEP) forms. Stores 30 lists, each containing up to 100 goals, objectives, or activities from which IEP forms can be created. Formats are limited, and design could be smoother.

INSIDE OUTSIDE OPPOSITES
Rating: **72** Ages: 3–7
Queue, Inc. (1986). $39.95.
Apple
SE/1 SP/4 LA/1
Content: *Opposites*

Contains 20 antonym pairs (in/out, high/low) that can be illustrated using the arrow keys. Pressing the spacebar brings up the next antonym pair. Easy to use. Similar to "Stickybear Opposites." Colorful graphics.

INSIDE OUTSIDE SHAPES
Rating: **76** Ages: 3–7
Queue, Inc. (1986). $39.95.
Apple
SP/8 CL/1,2
Content: *Six shapes and corresponding words*

Using arrow keys and spacebar, child must find a shape hidden in a picture. A correct response animates the picture and plays music. Pressing the spacebar brings up the next picture. Good graphics. Contains 18 pictures. Similar to "Stickybear Shapes."

INTEGRATED LEARNING SYSTEM
Rating: **79** Ages: 5–up
Josten's Learning Corporation (1987). Starts at $16,800.00.
IIGS, IBM*, Mac
LA/4-8 CL/1-6 NB/1-8 OT/1 CP/1
Content: *Math and reading K–9*

A networked computerized math and reading curriculum containing 1800 separate lessons stored on a laser disk which can be accessed by up to 40 stations at once. Employs the use of headphones, speech synthesis, and speech input. Keeps and prints records, and automatically adapts to each child. Good design, sound and graphics.

INTRODUCTION TO COUNTING
Rating: **66** Ages: 4–7
Compton's New Media (1981). $39.95.
Apple*, IBM, Atari
NB/3 CL/1 SE/1
Content: *Counting*

A regimented sequence of eight counting activities. Begins with selecting a set to correspond with a given number and progresses all the way to subtraction. Management keeps score and controls presentation, which allows individualization. Requires adult setup with each use.

JACK AND THE BEANSTALK
Rating: **69** Ages: 7–12
Queue, Inc. (1985). $39.95.
Apple
LA/5,8 TI/5
Content: *Word recognition, event sequence*

Children explore their own version of a traditional folk tale by playing the role of Jack, making decisions by selecting two-word commands, e.g., "trade cow." Reading required. Could be used as language experience with younger children. A Spanish version is available. Offered in a lab package (10 disks) for $147.00.

JACK AND THE BEANSTALK
Rating: **70** Ages: 2–6
Tom Snyder Productions, Inc. (1988). $44.95.
Apple*, IBM, Mac, IIGS
LA/3,4,5
Content: *Letter and word recognition, reading stories*

Child and adult read through a space-age version of Jack and the Beanstalk, pressing any key to change the page. Every five or six pages, a choice is offered, e.g., to continue climbing the beanstalk or not. Reading required for independent use, although graphics and sounds help guide child through the story.

JEN THE HEN
Rating: **77** Ages: 3–6
Hartley Courseware (1989). $59.95.
Apple
LA/5, 6, 8
Content: *Short "e" sound and reading comprehension*

Contains 18 lessons on two disks. Each lesson consists of a short story (four to seven paragraphs) and comprehension questions. Child can hear sentences or words with an optional Echo or Ufonic synthesizer. Makes use of animated graphics to illustrate stories. Vocabulary builds on the short "e" sound, using C-V-C words from Dolch lists. Includes diagnostic record keeping.

JOYSTICK TRAINER
Rating: **78** Ages: 3–up
R. J. Cooper & Associates (1989). $50.00.
Apple
SP/3,7,9
Content: *Joystick skills for powered wheelchairs*

Eight simple games designed to provide practice with a joystick. The games range in difficulty from seeing arrows move in the direction joystick is moved to moving through a six-room maze containing a treasure chest that holds the parts to a puzzle. A joystick is required. Call R. J. Cooper for a free demonstration disk.

JPUZZLE 1.1
Rating: **79** Ages: 4–up
Sofia Systems (1992). Shareware ($16.00 reg.)
IBM (Windows)
SP/1,4,7
Content: *Problem solving*

A puzzle game designed for Windows containing 4 to 400 squares sections. Child uses mouse to select a square and then the new location. A "sliding" option allows the child to move sections into an empty position. Comes with four pictures, although puzzles can be made from any digitized picture. Includes hit feature, timer, record of the number of moves, and registration form. Registration provides more options and additional puzzles.

JR. TYPER
Rating: **41** Ages: 5–up
Aquarius Instructional (1985). $45.00
Apple*, TRS 80
LA/4 OT/3
Content: *Touch typing*

Presents a fixed series of typing problems. As a child types, graphics or words accumulate on the screen. Helpful graphic hands point out finger positions. Contains 54 combinations on two disks. Inflexible design allows little child-control.

JUNGLE SAFARI
Rating: **82** Ages: 5–up
Orange Cherry Software (1991). $59.00.
IIGS* (1 MB), IBM (with Covox), CD-ROM version available
SP/7 OT/6
Content: *African plants and animals*

Child uses mouse to gain access through a picture menu and explore four African habitats: plains, rain forest, river, and tall grass. Once in a habitat, child can move through various scenes to discover plants and animals. Clicking on a plant or animal prompts written paragraph of information. Contains over 80 animals and plants. Clear graphics and speech. Pictures of animals can be printed. Difficult for preschoolers.

JUST AROUND THE BLOCK
Rating: **89** Ages: 5–10
D. C. Heath & Company (1988). $75.00.
Apple (128K)
LA/2,3,5,9 CP/4 SP/4,7
Content: *Language experience*

Children use mouse, Koala Pad, joystick, or arrow keys to select or move objects, backgrounds, words, or characters of a story. Children can also add their own words. Resulting stories can be saved and printed in color. Includes four copies of the storybook. Good design. Fun to use.

JUST GRANDMA AND ME
Rating: **90** Ages: 3–8
Broderbund Software (1992). $49.95
Mac (CD-ROM)
LA/5,6,8 TI/6
Content: *Enjoying storybooks, introduction to computers*

A 12-page storybook by Mercer Meyer about a young boy who spends the day at the beach with his grandma. Each page contains 10 to 20 objects that are activated by clicking on them. For example, selecting a mailbox causes it to open (with a squeek) to reveal a sleeping cat. Clear graphics, real voices, and sound. No printing or customizing options. Available in three languages —Spanish, English, and Japanese. Children of all ages enjoy this porgram.

KATIE'S FARM
Rating: **83** Ages: 2–6
Lawrence Productions, Inc. (1990). $39.95.
IIGS*, Mac, IBM (VGA or CGA), Mac II, Amiga
LA/1 TI/2,6 CL/1
Content: *Exploring, talking about actions*

Child uses a mouse (required) to operate a picture menu to explore a farm. For example, selecting the hen shows a girl checking a nest for eggs. Includes a cornfield, barn, old tree, corral, chicken coop, and a pond. Children respond well to this program, although it has limited content. It is very easy to operate and has clear graphics and recorded sounds. Similar to "McGee."

KERMIT'S ELECTRONIC STORYMAKER
Rating: **77** Ages: 4–up
Joyce Hakansson Associates (1984). $5.95.
C64
LA/6,8,9 CP/4 TI/6
Content: *Words and their meaning*

Child uses joystick to select the elements of a sentence, which are illustrated with clever animation and music. There are 14 different sentence forms, each on one screen. Resulting stories can be up to 14 pages long, and can be saved. Some reading required. Available in software stores only.

KEY WORDS: FIRST KEYBOARDING SKILLS
Rating: **77** Ages: 4–8
Troll Associates (1992). $39.95
Apple
LA/4,5
Content: *Matching letter and number keys on the keyboard*

Beginning keyboarding activities that use a model keyboard appearing on the screen. Four activities: (1) Typing to keep up with a frog that catches flies; (2) Racing a timer, set fast or slow, by filling in missing keys; (3) Copying three- or five-letter patterns, illustrated by a jumping frog; and (4) Typing short words using an illustrated keyboard if necessary. Allows upper- or lowercase display. Nice early keyboard program.

KEYTALK
Rating: **76** Ages: 3–8
P.E.A.L. Software (1987). $89.00.
Apple* (64K), IBM
LA/3,4,5,9 CP/4
Content: *A beginning literacy activity*

A talking word processor that says in a robotic voice anything that is typed. Uses regular or Muppet keyboard. Says each letter, word, and sentence. Allows stories up to one page in 40-column text. Stories can be printed and saved. Includes on-screen word list. Pronunciation exceptions can be added.

KID DESK
Rating: **90** Ages: 3–10
Edmark Corporation (1992). $49.95
Mac*, IBM
OT/6, TI/8,9 LA/1
Content: *Children's file manager*

An easy-to-use hard-disk manager for children. Each child's individual desk contains a clock (with current time), calculator (with large buttons), calendar (which can be changed or printed), crayon set (which allows selection from six desktop patterns), answering machine (record/listen to messages), and picture icons (representing each program on the hard disk). Flexible set-up options allow high degree of control for each child. Ideal for preschool use. See *EZplay* for a similar program for IBM computers.

KID WORKS
Rating: **90** Ages: 4–10
Davidson and Associates, Inc. (1991). $49.95.
IBM (640K, VGA, printer, mouse, hard drive)
LA/6,7,8,9 CP/1,4
Content: *Creative writing, drawing, creating printed material*

A talking word processor that allows the creation of illustrated stories. Includes 245 built-in rebus icons, which can also be customized. Detailed illustrations can be created. Once story is complete, it can be played back (the computer illustrates and reads), printed, or saved. Two sizes of print. Teacher options allow customization. External speech device recommended (e.g., Echo II or Covox). Requires 2MB hard drive space.

KID WORKS 2
Rating: **91** Ages: 4–10
Davidson and Associates (1992). $59.95
Mac (color, HD)
LA/3,4,5,6,7,8,9 TI/6 CP/1,4
Content: *Creative writing, drawing, creating print material*

An upgraded version of *Kid Works* (see previous review) that employs features of the color Macintosh, including a choice of ten fonts in the word processor, faster overall operation, and a voice-recording feature. Speech could be improved. Makes use of picture pull-down menus that children need help with at first but then can use on their own. Parent options allow protection of files on the hard drive.

KID PIX
Rating: **93** Ages: 3–up
Broderbund Software (1991). $44.95.
Mac* (color or B&W), IBM (VGA and hard drive)
CP/1,4 LA/3 SP/4,7 TI/2
Content: *Drawing, creation of visual effects*

A powerful, easy-to-use graphics creation program. Child uses mouse (required) to draw, dribble paint, stamp letters, erase, and create shapes and backgrounds. Includes 112 picture "stamps," 36 colors (16 for IBM), 13 fill shades, and a range of entertaining sound effects (sound device recommended for IBM). Can be customized for independent use by younger children. Pictures are saved or printed in color. Limited utility for writing. Highly recommended, fun program.

KID PIX COMPANION
Rating: **Not rated** Ages: 5–up
Broderbund Software (1992). $49.95
Mac (HD, color)
CP/1,4 LA/3 TI/6 SP/4
Content: *Creation in video and print media*

A supplementary program that expands the capabilities of *Kid Pix* (see previous review). Capabilites include the linking of *Kid Pix* pictures into a slide show with prerecorded sound effects, music, and transition effect, and QuickTime support for making short animated "movies" that allow children to experiment with moving visual techniques. Additional stamps, blank coloring-book pages, and hidden pictures. *Kid Pix* required.

KID'S STUFF
Rating: **76** Ages: 3–8
Stone & Associates (1984). $39.95.
IBM*, Apple, Atari ST
LA/4,5 SE/4,5
Content: *Counting skills, letter recognition*

Offers three activities accessible by a picture menu. In the letter recognition activity, child types in letters of a word, which creates animation and sounds. An entertaining program that provides options for the child.

KIDS ON KEYS
Rating: **62** Ages: 4–9
Queue, Inc. (1983). $29.95.
Apple*, IBM
LA/4 CL/1 OT/3
Content: *Letter recognition*

Presents three games in which letters, pictures, or words rain down the screen. Child stops them and scores points by typing in the appropriate letter or word. Three levels of difficulty. Good keyboard practice, but requires skills that few 3- or 4-year-olds have.

KIDSMATH
Rating: **83** Ages: 3–8
Great Wave Software (1989). $49.95.
Mac (512K) (Color version available)
NB/1,3,4,5,6,8 TI/3,6 OT/1
Content: *Teaching and reinforcing basic math concepts*

Child uses mouse in eight counting and computing activities ranging from counting up to 9 to identifying fractions. Contains a fraction activity that combines a part-whole and a measurement approach. Management features make it easy to customize activities to each child. Some reading required.

KIDSTIME
Rating: **82** Ages: 3–8
Great Wave Software (1987). $49.95.
Mac*, IIGS, IBM
LA/4,9 CP/2 CL/2 NB/3 OT/1 SE/1
Content: *Letters, numbers, matching, writing, music*

Five games in which child uses mouse to play a piano, record and play back melodies, match letters or pictures, use or create dot-to-dot pictures, find letters on the keyboard in upper or lower case, or write stories and have them read back using Mac's built-in speech. Nice range of activities. Good child-control. IBM and IIGS versions are more limited in design and function.

KIDSWORD
Rating: **55** Ages: na
Kidsview Software, Inc. (1989). $49.95, $39.95 (Abbreviated versions available for IIGS, IBM).
Apple*, C64
LA/9 CP/4
Content: *Large-type word processing*

A word-processing program that displays large (20-letter-per-line) print on the screen. Includes such advanced features as cut and paste, insert or typeover modes, and word wrap. Text can be saved or printed. Complicated to use. Adult help is required to get started. See *Muppet Slate* or *Magic Slate* for other large-letter word processors.

KIDWARE 2 LEARNING CENTER 2.03
Rating: **71** Ages: 3–5
Mobius Corporation (1991). $1,215.00 (1 station).
IBM with PowerPad (Digispeech) microphone, and speech card
LA SP TI CP NB
Content: *Variety of skills and experiences*

A LinkWay-based software package consisting of 11 programs: *Electronic Easel, The Farm, Fantastic Animals, Fun with Letters and Words, Mural Maker, I Can Count the Petals of a Flower, Electronic Builder, Music Maker, Word Processor for Kids, Facemaker Golden Edition,* and *Mixed-Up Mother Goose* (see individual reviews of each title). Clear picture menus give access to each program. Management system tracks time for child's use of program. Uses digitized speech that can be customized.

KIDWRITER
Rating: **73** Ages: 6–10
Queue, Inc. (1984). $49.95.
Apple*, IBM (CGA, 3.5")
LA/9 CP/4
Content: *Creating computer storybooks*

Child creates picture, selecting from 100 objects that can be moved and changed in size or color. Text can be typed on the lower third of the screen. Stories can be saved and can have several pages. Some reading required. A newer version (*Kidwriter Golden Edition*) contains 200 objects, allows incorporation of music, and adds printing capacity.

KIERAN
Rating: **70** Ages: 3–6
Ohm Software Company (1986). $39.95.
Mac
LA/1 NB/3 TI/9 SP/2
Content: *Letters, numbers, clocks, upper/lower case*

An easy-to-use program with eight activities. Child uses mouse to choose a letter and see associated picture, to choose a number and see associated set, and to choose a clockface and hear the time. There is also an upper/lower case matching activity, a sliding square puzzle, a calculator, a typewriter, and a mystery picture.

KINDER CRITTERS
Rating: **70** Ages: 5–6
Micrograms (1991). $29.95.
Apple
LA/4,5 CL/2 OT/5
Content: *Addresses, phone numbers, and letter recognition*

Uses Macintosh's internal speech. Two disks: (1) Child uses spacebar to match upper- or lower-case letters or three-letter words in simple multiple-choice format. (2) Child receives practice recognizing and typing own phone number and address. Data file can keep eight classes of 40 children each. Useful for kindergarten teachers.

KINDER KONCEPTS MATH
Rating: **57** Ages: 4–7
Queue, Inc. (1985). $65.00.
Apple
NB/1,2,3,4,5,6,7,8
Content: *Number and math skills*

Fifteen well-designed math games cover various number concepts, e.g., estimating length, using units of measurement, counting, numeral recognition. All games follow same drill-and-practice format. Menu designed for adults, which limits child control.

KINDER KONCEPTS READING
Rating: **44** Ages: 4–8
Queue, Inc. (1985). $65.00.
Apple
LA/4 CL/1 OT/1
Content: *Reading readiness*

Fifteen activities on three disks each present 10 problems concerning a specific reading concept including matching letters and shapes, upper/lower case, alphabetical order, and memory. Keeps track of progress. Offers a wide range of content. Some reading required, especially for main menu.

KINDERCOMP
Rating: **68** Ages: 3–8
Queue, Inc. (1982). $29.95.
Apple, IBM*
CP/1 CL/2 LA/4
Content: *Matching, U/L-case practice, drawing*

Offers six games of varying difficulty, including a simple drawing (move cursor with arrow keys) and matching activity that increases in difficulty as child improves. Offers variety of content, which lengthens the life of the program. Menu requires reading.

KINDERCOMP GOLDEN EDITION
Rating: **70** Ages: 3–7
Queue, Inc. (1986). $39.95.
Apple*, IBM (3.5")
NB/3 LA/4 CL/2 CP/1
Content: *Counting, letters, matching, and drawing*

Eight activities: Draw, Name, Match, Letters, Alphabet, Count, Sequence, and Add. Provides practice with the alphabet, upper/lower-case letters, counting (as high as 30), number sequence, counting by 2s, 3s, etc., and addition (sums up to 18). Offers good range in content and level of challenge.

KINDERMATH II
Rating: **57** Ages: 4–7
Houghton Mifflin Co. (1988). $276.00.
Apple (64K)
NB/1,2,3,4,5,8 CL/2 SP/8
Content: *Math fundamentals*

Ten disks cover 90 separate objectives, starting with "same" and "different" and ending with addition and subtraction problems with sums less than 10. Child uses joystick (required) to move cursor to correct answer. Keeps records. Requires adult setup and Echo speech synthesizer. Dry presentation.

KNOWING DIRECTIONS
Rating: **66** Ages: 3–6
Access Unlimited (1988). $25.00.
Apple
SP/4
Content: *Directions up, down, left, right*

Four activities on one disk: (1) Child indicates when two arrows point in the same direction, (2) Child matches word (up, down, left, right) to arrow, (3) Child indicates which arrow goes with a direction word, and (4) Child moves a shape in a requested direction, using the arrow keys. Correct answers yield a burst of colors and a short tune, unrelated to concept.

KNOWING NUMBERS
Rating: **67** Ages: 3–6
Mindscape, Inc. (1983). $61.00.
Apple
NB/1,3,7
Content: *Fundamental math skill practice*

Presents counting, addition, and subtraction activities. Child uses nodding or shaking heads to decide (1) if a group matches a numeral, (2) which group has "more," and (3) if the sum of two groups equals a third. No reading. Some management.

KOALA PAD GRAPHICS EXHIBITOR
Rating: **76** Ages: 5–up
Koala Technologies Corp. (1983). $139.50.
Apple IIe*, IBM
CP/1,4 SP/7
Content: *Drawing*

This is the software that comes with the Koala Pad, which hooks into a joystick port. By moving finger or pointer across a pad surface, a child can draw lines, circles, or squares and fill or magnify shapes, using many available colors. Picture menu is usable but complex for young children. Price includes Koala Pad and program.

LANGUAGE EXPERIENCE RECORDER PLUS
Rating: **55** Ages: 5–up
Teacher Support Software (1987). $99.95.
Apple, IBM
LA/1,2,3,4,5,9 OT/4
Content: *Word processing*

A large-print (20-column) word processor. Stories can be saved, analyzed for readability level, printed, or read back through an Echo or Slotbuster speech synthesizer. Two small-print (40- and 80-column) versions are included. Adult help required to use menus.

LEARN ABOUT: ANIMALS
Rating: **80** Ages: 5–8
Wings for Learning (1989). $75.00.
Apple (128K, 3.5" or 5.25")
CP/4 LA/8,9 SP/1,5 SE/1
Content: *Animals, environments, and creative writing*

Child uses a mouse (recommended), joystick, or Muppet Learning Keys to explore animal homes, babies, food, movements, or size. Includes activities that allow a child to write about habitats or to create and print animal masks. High degree of child-control. Work can be saved or printed. Startup with 5.25" disks requires disk change.

LEARN ABOUT: PLANTS
Rating: **80** Ages: 5–8
Wings for Learning (1990). $75.00.
Apple (128K, 3.5" or 5.25")
CP/4 LA/8,9 SP/1,5 SE/1
Content: *Plants, environments, and creative writing*

Child uses mouse (recommended), joystick, or Muppet Learning Keys to explore what plants are, where they live, their seeds, how we use them, and what they need to live. Additional activities allow child to write about plants or to create imaginary plants. High degree of child-control. Use of 5.25" disks requires disk change for startup.

LEARN THE ALPHABET
Rating: **56** Ages: 4–8
Queue, Inc. (1984). $24.95.
Apple*, IBM
LA/4,5 CL/2 SP/4
Content: *Upper/lower case, alphabetical order*

Child uses arrow keys or joystick to match letters to complete an alphabetical sequence or simple words. Eight levels, ranging from matching one letter to completing a word. Somewhat confusing graphics.

LEARN TO ADD
Rating: **75** Ages: 3–7
Queue, Inc. (1984). $24.95.
Apple*, IBM (CGA, 3.5")
NB/1,3,4,7
Content: *Matching numbers, addition, subtraction*

Child uses joystick or arrow keys to match numbers to sets, match sets, or do simple addition or subtraction problems. Child is rewarded with rainbow. Four challenge levels (9 - 4 = 5 most difficult). Allows high level of child-control. IBM version comes on back of Apple disk.

LEARNING ABOUT NUMBERS
Rating: **78** Ages: 3–6
C&C Software (1983). $50.00.
Apple
NB/8 TI/9
Content: *Counting, clocks, basic math facts*

Provides a variety of number experiences: Let's Count, Let's Tell Time, and Arithmetic Fun, all with varying difficulty levels. Many aspects of this program can be managed by an adult, due to a well-designed management system.

LEARNING DIRECTIONS
Rating: **62** Ages: 3–6
Access Unlimited (1988). $25.00.
Apple
SP/4
Content: *Directions of up, down, left, right*

For use in special education settings. Child progresses object towards a marker by pressing the spacebar or single switch. Also includes a non-structured activity in which child uses the arrows to move many objects around the screen.

LEARNING LETTERS
Rating: **62** Ages: 3–6
Access Unlimited (1988). $25.00.
Apple
LA/4 OT/3
Content: *Matching letters*

Three activities on one disk: (1) Match the Letter—child sees two letters and uses spacebar and RETURN to indicate when they are the same. (2) Press the Letter—child sees a letter and presses it on the keyboard. (3) Typing Practice—child can "type" any letter with large upper-case, multicolored letters.

LEARNING NUMBERS
Rating: **63** Ages: 3–6
Access Unlimited (1989). $25.00.
Apple
NB/2,3,4
Content: *Counting from 1 to 5*

Three simple activities involving counting up to 5: (1) Match Numbers—child uses spacebar to match two numerals. (2) Match Sets—child sees a set and creates a matching one by pressing the spacebar. (3) Match Sets to Numbers—child sees a set of 1 to 5 objects and selects matching number. Can be used with a single switch. Reinforcements not related to content.

LEARNING SHAPES
Rating: **66** Ages: 3–6
Access Unlimited (1988). $25.00.
Apple
SP/8 CL/2 CP/1
Content: *Practice with four basic shapes*

Four simple activities: (1) Match the Shapes—child indicates when two shapes are the same. (2) Name the Shape—child matches a shape with its name. (3) Find the Shape—child selects a shape to match a given word. (4) Draw a Picture—child uses arrows, spacebar, and RETURN to create structures from shapes. Color monitor recommended.

LEARNING SIGHT WORDS
Rating: **56** Ages: 3–6
Access Unlimited (1988). $25.00.
Apple
LA/5 CL/2
Content: *Matching and typing sight words*

Three simple activities: (1) Match the Words—child matches two words. (2) Spell the Word—child sees a word and must type it. (3) Guess the Word—child sees a word spelled with cartoon letters and types it. Contains 220 sight words. Uses regular or alternate keyboards.

LEARNING THE ALPHABET
Rating: **66** Ages: 3–6
Access Unlimited (1988). $25.00.
Apple
LA/4 CL/2
Content: *Alphabet skills*

Contains three alphabet activities: (1) The Alphabet Song—child can hear the alphabet song, one letter at a time, by pressing the spacebar. (2) Practice the Alphabet—child sees a letter and must press the letter on the keyboard. (3) Guess the Next Letter—child is shown part of the alphabet and must enter the next letter in sequence.

LEARNING THE ALPHABET
Rating: **50** Ages: 3–6
MicroED, Inc. (1987). $29.95.
Amiga (512K)
LA/4
Content: Matching letters, alphabetical order

Child is shown portion of the alphabet. By clicking the mouse, child selects matching letters, in order, from letters scattered on the screen. The computer says each letter and gives a feedback message in a fairly clear voice. Repetitive format causes children to lose interest.

LET'S GO TO HANNAH'S HOUSE
Rating: **48** Ages: 3–5
Intellimation (1990). $39.95.
Mac (hard disk, Hypercard)
LA/4 NB/4 CP/1
Content: *Pre-literacy skills*

A computerized scrapbook for Hannah, the author's daughter. By clicking on one of 15 icons that appear in the main menu, a child can hear Hannah's family's voices and her favorite tunes, count the chimes of her clock, draw pictures, and so on. Content is of little meaning to most children. Consists of a large, 17-stack hypercard program. Not recommended.

LETTER GAMES
Rating: **34** Ages: 3–6
Island Software (1982). $25.00.
Apple
LA/4 CL/2
Content: *Letter Recognition*

Three drill games for letter discrimination. Upper/lower-case options are available. No branching. Has errors if used without light pen. Not recommended.

LETTER RECOGNITION
Rating: **48** Ages: 5–7
Hartley Courseware (1983). $39.95
Apple
LA/4
Content: *Location of letters on keyboard*

A single letter is presented for child to find on keyboard. Model keyboard appears as help is needed, showing letter location. Options include upper/lower-case and number words. Records are kept.

LETTERS AND FIRST WORDS
Rating: **68** Ages: 3–6
C&C Software (1984). $60.00.
Apple
LA/4,5,6
Content: *Letters, initial consonants*

Three games: ABC, Letter Sounds, and Building Words. Management system allows for records for up to 50 children. Child makes selections by moving box cursor. Offers wide range of content and effective design features.

LETTERS AND WORDS
Rating: **68** Ages: 3–6
Mindscape, Inc. (1983). $61.00.
Apple*, IBM
LA/4,5
Content: *Letter recognition, alphabet order*

Three games on letters and words. Child selects Y, N, ?, or ESCAPE for each problem. Provides drill on alphabet order by asking what letter fits into a missing series. Management features: selection of number of rounds, performance summary, selection of timing of cursor movement, and new word list.

LETTERS, PICTURES & WORDS
Rating: **67** Ages: 3–6
Queue, Inc. (1990). $39.95.
Apple
LA/4,5
Content: *Letter recognition*

Four activities on two-sided disk: (1) A letter and scene are shown. Child must find letter on the keyboard to animate the scene. (2) An object in a scene is highlighted. Child selects beginning letter from four choices. (3) A letter is shown. Child moves pointer to a matching object. (4) A word is shown. Child moves pointer to the matching object. Uses cartoonist graphics. High in child-control. Limited in content.

LEXIA I, II, III
Rating: **87** Ages: 5–7
Lexia Learning Systems, Inc. (1992). $250.00 per level.
IBM (Digispeech required)
LA/4,5,6 CL/2
Content: *Word recognition skills*

Consists of 18 programs (six per level) designed to develop basic skills: (1) Level I—short vowels and consonants; (2) Level II—short/long vowels, consonant digraphs and blends; (3) Level III—vowel review, vowel words, vowel combination words, two-syllable words, and alphabetizing. Effective design branches automatically, keeps on-going individualized records. Works with mouse or TouchWindow. Also available is a 5–10 minute diagnostic oral reading test, *Assess* ($150.00), for Apple II or IBM.

LION'S WORKSHOP
Rating: **49** Ages: 4–8
Merit Software (1985). $24.95.
Apple*, C64
CL/2
Content: *Visual discrimination*

Two activities: (1) Child uses A and Z keys to move conveyer belt to select an object that goes with another (e.g., thread/needle). (2) Child selects missing piece of a given object. Limited content. Confusing graphics.

LITTLE PEOPLE BOWLING ALLEY
Rating: **70** Ages: 3–8
GameTek/IJE, Inc. (1988). $9.95.
Apple, IBM*, C64
SP/4 TI/1 NB/7
Content: *Spatial relationships and addition practice*

A bowling game. Child uses arrow keys (or joystick) to position a bowler and presses the spacebar to roll the ball and knock over up to six pins. Can be set for one or two players, or for child to add up own score (e.g., 33 + 6). More advanced level allows control over curve of the ball. Young children need help setting up options. Minor bugs in the IBM version.

LITTLE PEOPLE FARM CREATIVITY KIT
Rating: **81** Ages: 3–6
Gametek/IJE, Inc. (1992). $24.95.
IBM
SP/3,4 TI/9 LA/5 CP/4
Content: *Seasons, farms, farm words, creation of cutout products*

Child uses mouse or arrow keys to select objects to place in a farm scene. When pointer is moved over an object, the associated word appears. Pressing ENTER selects the item, which is shown in an animated scene in one of the seasons. It can then be printed — making cutout blueprints with finger puppets. A silo and barn contain nearly 150 hidden items. Easy to use. Offers little creativity.

LITTLE PEOPLE MAIN STREET CREATIVITY KIT
Rating: **78** Ages: 3–8
GameTek/IJE, Inc. (1992). $24.95.
IBM
SP/3,4 CP/4
Content: *Exploring a street, creating with paper cutouts*

Child sees a main street with seven buildings. By moving the pointer with mouse or arrows, child can go into buildings and find 200 items that illustrate short animated routines. For example, child can turn on a light to see a barber give a haircut. Once in a building, a print icon appears that allows the printing of 3-D cutout sheets, which can be colored and glued.

LOGIC BLOCKS
Rating: **86** Ages: 5–12
The Learning Box (1991). $59.00.
IIGS, Mac (color)
SP/1,2,3,8,9,10 CL/1,2,3 SE/1-4 CP/1
Content: *Understanding geometry, patterns, and logic*

Four activities: (1) Layers — child copies colored block patterns. (2) Smokescreen — child uses attribute clues and memory to uncover a hidden block pattern. (3) Patterns — child finishes incomplete block patterns by following symmetrical design. (4) Mirrors — child creates a block pattern in reverse. Each activity contains an open-ended application that invites experimentation. An excellent addition to a K-3 math curriculum.

LOONEY TUNES PRINT KIT
Rating: **46** Ages: 3–up
Hi Tech Expressions (1989). $11.95.
Apple*, IBM, C64, Atari
CP/4 LA/9
Content: *Creating printed materials*

A printing program featuring 60 Looney Tunes characters, 20 borders, and 7 typefaces in three sizes. Can make cards, banners, signs, stationery, or storybook. Design makes it difficult to use. Reading required.

MAGIC CRAYON
Rating: **75** Ages: 4–6
C&C Software (1983). $45.00.
Apple
CP/1,3,4 SP/11
Content: *Drawing with arrow keys*

A simple drawing program in 16 colors and three difficulty levels. Good record keeping and management are available to the teacher or parent. Stickers are included to label the keys.

MAGIC MELODY BOX
Rating: **59** Ages: 3–6
W. Wes Horlacher's New Media Values Center (1988). $19.95.
Atari
CP/2 SE/1
Content: *Creating music*

Child uses joystick to draw a melody line, to which the computer adds chords and replays. A three-octave major scale is available. A basic cartridge is required. Some reading required.

MAGIC SLATE II
Rating: **81** Ages: 7–up
Sunburst Communications, Inc. (1984). $65.00.
Apple
LA/4,9 CP/4 OT/3,4
Content: *Word processing*

Easy-to-use word processor with large (20-column) text and picture menu. Effective for experience stories for preschool level. Stories can be saved, printed, and edited. Also available in 40- and 80-column versions (these contain more editing and print options). If used on a Corvus or AppleShare network, a mail feature allows children to send messages to one another. Spanish version available.

MAGIC STRING, THE
Rating: **46** Ages: 5–6
Troll Associates (1985). $39.95.
Apple
LA/11
Content: *Reading skills*

Three activities: (1) Shows six words. Using spacebar, child arranges words in alphabetical order. (2) Child selects word that doesn't belong, e.g., "swan, duck, fail." (3) Child arranges letters to make words. Menus require reading, limiting child-control.

MAKE-A-BOOK
Rating: **67** Ages: 5–11
Teacher Support Software (1991). $59.95.
IBM
LA/9 CP/4
Content: *Creation of books*

A talking word-processing program with printing routines that allow creation of five sizes of books on standard printing paper. Pull-down menus include help screens and printing and speech options. Includes 14 large-sized fonts, although only one can be used per file. Mouse optional, but recommended. Supports a variety of printers. Works with DoubleTalk PC, Echo, Covox, or Sound Blaster speech cards. Setup required.

MARIO TEACHES TYPING
Rating: **88** Ages: 5–up
Interplay Productions (1992). $39.95.
IBM (Sound card, 2.3MB)
LA/4 OT/3
Content: *Typing skills and practice*

Three-level typing activity: (1) Smash & Dash—user types scrolling letters to earn points. For beginners typing from 5 to 12 words per minute (wpm); (2) Wet Word Challenge — the faster scrolling words are typed, the faster Mario swims; (3) Tunnel of Doom — user types scrolling sentences to avoid falling blocks. Designed to build typing speed to 50 wpm. Program uses clever game-like sounds and graphics. Record keeping saves games for ongoing play. The most enjoyable typing program yet reviewed.

MARVIN THE MOOSE VOLUME 1
Rating: **64** Ages: 3–8
Milliken Publishing Co. (1991). $49.95.
IBM (Sound card, mouse)
LA/9,10 NB/3 TI/6 SE/1 OT/5 CP/4
Content: *Reading comprehension and social skills*

Consists of two 23-screen stories featuring Marvin the Moose. Using mouse or arrows, a child can turn pages as the story is read. Every few pages, a multiple-choice question is asked. An activity disk contains a four-page coloring book (with 16 colors) and a writing option that allows one paragraph to be printed. Each page also can be printed. Management options allow adult control over level of questions and story presentation.

MARVIN THE MOOSE VOLUME 2
Rating: **64** Ages: 3–8
Milliken Publishing Co. (1991). $49.95.
IBM (Sound card, mouse)
LA/9,10 NB/3 TI/6 SE/1 OT/5 CP/4
Content: *Reading comprehension and social skills*

Marvin the Moose Volume 2 consists of two 23-screen stories featuring Marvin the Moose. Using mouse or arrows, a child can turn pages as the story is read. Every few pages, a multiple-choice question is asked. An activity disk contains a four-page coloring book (with 16 colors) and a writing option that allows one paragraph, or a full page, to be printed. Management options allow selection of question level and story style.

MASK PARADE
Rating: **84** Ages: 4–12
Queue, Inc. (1984). $39.95.
Apple*, IBM (CGA, 3.5")
CP/1,4 SP/5,7
Content: *Creative design*

Child can design and print masks and other cutouts. The design part requires choosing the components of the mask (eyes, nose, etc.). Easy to print, once printer is set up. Pictures can be saved on disk. No reading required. Will not print on the IIGS.

MATCH MAKER (BEGINNING)
Rating: **77** Ages: 3–6
Wescott Software (1991). $20.00.
IBM
CL/2 OT/1
Content: *Matching objects*

A version of concentration in which the child uses the arrow keys or a mouse to turn over cards and make matches. Includes 10 sets of pictures that vary in difficulty level (e.g., numerals, colors, safety signs, upper- and lower-case letters). Options allow for number of cards (from 4 to 30), selection of one or two players, and presentation of cards.

MATCH-ON-A-MAC V.2.0
Rating: **79** Ages: 3–7
Teach Yourself by Computer (1992).
$39.95.
Mac (HD)
CL/2 NB/1,3,4 LA/4,5 SP/8
Content: *Matching letters, shapes, numbers, words; mouse practice*

A multiple-choice program in which child matches shapes, upper/lower-case letters, short words, the letters b and d, quantities, and numbers with quantities. Also has a game for practicing mouse use. Keeps records. Has a "lesson plan" feature whereby adult can determine the activities that appear. Easy to use. A color version is available.

MATH AND ME
Rating: **78** Ages: 3–6
Davidson and Associates, Inc. (1987).
$29.95.
Apple* (128K), IBM, IIGS ($49.95)
NB/1,3,4,7 CL/2 SE/4
Content: *Shapes, patterns, numbers, and addition*

Twelve activities covering shape matching, number recognition, patterns, numerical order, and addition with objects or numbers. In each activity, child uses mouse (optional) or arrow keys to select one of four boxes in a multiple-choice format. Good design and graphics. Good range of content. Talking version for the IIGS gives verbal feedback.

MATH BLASTER PLUS
Rating: **85** Ages: 6–12
Davidson and Associates, Inc. (1991).
$49.95.
Mac* 1 MB (2MB for color), IBM (CGA, VGA) NB/9 TI/3
Content: *Basic math facts practice*

Four activities provide practice with math problems involving basic addition, subtraction, multiplication, division, and percentages. Activities mix math facts with arcade-style games. Features include choice of problem display, record keeping, customization of problems, and creation of printed math worksheets. Excellent use of sound and graphics. Mouse and printer recommended, but not required. Very well designed. Fun to use.

MATH CONCEPTS LEVEL P
Rating: **73** Ages: 4–5
EduQuest (1987). $119.00.
IBM
NB/1,3,4,6,7,8 CL/2 SE/3 SP/8
Content: *Math concepts and symbols*

The first in IBM's Math Concepts series, this program offers 4 units and 18 lessons that range from comparing sizes (child uses arrows to select largest picture) to identifying shapes. Child first types in password for custom lesson. Keeps records. Offers many setup and teacher options. Wide range of content. Some reading required.

MATH MAGIC
Rating: **53** Ages: 4–9
MindPlay (1984). $49.99.
Apple*, IBM, Mac
NB/3
Content: *Math facts (add., sub., mult., div.)*

A math game in which player deflects bouncing ball to break down a wall while periodically answering math problems to score points. Design options include paddle size, level and number of problems, and speed of ball.

MATH MAZE
Rating: **52** Ages: 6–10
Compton's New Media (1983). $51.00.
Apple*, IBM, Atari ($19.95), C64 NB/9
Content: *Basic math facts*

Child moves fly through 1 of 40 simple mazes (can design own) to the correct answer, using a basic fact concerning addition, subtraction, division, or multiplication. Available option turns spider loose in maze. A fun activity for basic math practice.

MATH RABBIT
Rating: **78** Ages: 5–7
The Learning Company (1986). $39.95.
Apple*, IBM
NB/1,3,4,8 OT/1
Content: *Counting, matching sets, addition, subtraction*

Enjoyable activities. Child uses arrow keys, spacebar, and RETURN to count using a number line and musical scale; to match numerals; to match a set of objects or a math problem to a given number; to solve math problems; to create number patterns; and to match sets of objects, numbers, and math problems. Four levels of play.

MATH SEQUENCES
Rating: **69** Ages: 5–6
Milliken Publishing Co. (1985). $60.00.
Apple
NB/3,8
Content: *Number readiness*

First of a 17-disk sequence spanning grades K-10 ($495 for all). Uses a flexible, powerful password system that can control content and keep records for up to 100 children. Children start by using number keys to count objects and can work up to numerical order, e.g., (6, _,8).

MATHEMATICS LEVEL A
Rating: **69** Ages: 6–7
S.R.A. (1988). $150.00.
Apple* (128K), IBM
NB/1,3,4,5,7,9
Content: *Whole numbers, addition, subtraction*

A six-disk computer-managed math program for grades 1 and 2. Contains 39 lessons on whole numbers, 26 lessons on addition, and 17 lessons on subtraction. Each contains 10 problems. A teacher can design a custom "lesson disk" for keeping track of each child's progress. Allows creation of worksheets. Good management. Rather dry presentation and complex setup routine.

MATHOSAURUS LEVEL K
Rating: **72** Age: 5
Micrograms, Inc. (1989). $24.95.
Apple
NB/1,2,3,4,5 CL/2
Content: *Beginning number concepts*

Contains six multiple-choice number activities in which child uses spacebar and RETURN to match numbers and sets, create a matching set, make a set to match a number, or identify a set that has more or less. Provides a range of easy-to-use activities involving numbers up to 10. No management. One disk can be used to load several computers.

McGEE
Rating: **78** Ages: 2–4
Lawrence Productions, Inc. (1989). $39.95.
IIGS (3.5"), IBM (VGA or CGA), Mac, Amiga
SP/6,7 CL/2
Content: *Independent exploration*

Child uses a picture menu to help a boy (McGee) explore and play in a seven-room house. There are things to do in each room, e.g., bouncing a ball. Very easy to use. Clever design. A good program for first-time computer users.

MCGEE AT THE FUN FAIR
Rating: **83** Ages: 2–6
Lawrence Productions, Inc. (1991). $39.95.
IIGS*, Mac, IBM (VGA or CGA), Mac II, Amiga
LA/1 TI/2,6 CL/1
Content: *Exploring, talking about actions*

Child uses a mouse (required) to operate a picture menu and explore a street fair. For example, selecting a clown prompts a balloon demonstration. Includes 13 animated sequences (e.g., a hot dog vender, a playground, a one-man band). Young children respond well to this program. Very easy to operate. Clear graphics and recorded sounds. Limited content. Similar to *McGee*.

MEASURE WORKS
Rating: **80** Ages: 6–12
MECC (1989). $59.00.
Apple (128K, 3.5" or 5.25")
NB/3,4,5,6 SP/4 CP/1
Content: *Practice with measurements*

Contains five activities providing practice recognizing linear sizes; drawing objects of various perimeters and areas; and selecting units for measuring volume, weight, and length. Can be set for English or metric units or for use with various grade levels. Contains minor content inaccuracies. Design is good for use in classrooms.

MEMORY BUILDING BLOCKS
Rating: **83** Ages: 5–adult
Sunburst Communications, Inc. (1986). $65.00.
Apple*, IBM, Mac
OT/1 CL/2
Content: *Visual and auditory memory skills*

Five Concentration-type games on one disk: Pictures, Words, Letters, Shapes, and Tunes. An easy-to-use management system allows use of own words or control over game difficulty. Minimal reading required. Operates with regular keyboard, Muppet keyboard, or TouchWindow.

MEMORY LANE 2.0
Rating: **68** Ages: 2–6
Stone & Associates (1990). $39.95.
IBM* (VGA or CGA), Atari ST LA/5
0T/1
Content: *Matching, sequencing, memory skills*

Consists of five activities. In the first three, child matches object with object, object with related object, or object with word. In the final two activities, child can choose from an 18-card concentration game or an ordering activity in which three objects are shown individually, prompting the child to select the correct order from three possibilities. Poor design requires that the child must find a keyboard letter to enter each answer. Good graphics.

MICKEY & MINNIE'S FUN TIME PRINT KIT
Rating: **79** Ages: 5–up
Walt Disney Software (1991). $19.95.
IBM (CGA, VGA)
CP/3,4 LA/8
Content: *Creating printed products*

A printing program that allows the creation of greeting cards, posters, banners, invitations, letterhead, and placemats. Includes 6 typefaces in three sizes, 20 borders, and 40 Disney-related clip art items. Menus can be used with a mouse (optional) and require reading ability. Page formatting capability is limited. Products can be previewed, saved, or printed in color.

MICKEY'S 123'S
Rating: **74** Ages: 2–5
Walt Disney Software (1990). $39.95.
IBM
NB/3
Content: *Counting from 1 to 9*

Child helps Mickey Mouse prepare for a surprise party by pressing number keys to determine how many guests to invite, how many party items to buy, how many wheels for Mickey's car, and so on. Children like the clear graphics and recorded sounds. Requires The Sound Source ($34.95) for high-quality sound.

MICKEY'S ABC'S
Rating: **78** Ages: 2–5
Walt Disney Software (1990). $39.95.
IBM
LA/4
Content: *Recognizing upper- or lower-case letters*

Child presses any letter key to see a letter-related routine, e.g., the letter "L" causes Mickey Mouse to turn off a light. Contains 80 different animated responses. Children like the animation and sounds, though they find the routines to be unresponsive at times. Requires The Sound Source ($34.95) for high-quality sound.

MICKEY'S COLORS & SHAPES
Rating: **72** Ages: 2–5
Walt Disney Software (1990). $39.95.
IBM (VGA, Sound Source recommended)
CL/1,2 SP/8
Content: *Colors and shapes*

Three activities: (1) Child selects objects for Mickey to juggle by pressing a color or shape on a vinyl keyboard overlay (included). (2) Child selects shapes and colors to be added to a scene that can be printed. (3) Child finds hidden animal by identifying the color and shape of an object animal is hiding behind. Fun context to experiment. Good graphics and sound.

MICKEY'S CROSSWORD PUZZLE MAKER
Rating: **76** Ages: 5–8
Walt Disney Software (1990). $29.95.
IBM, Apple*
LA/5,9
Content: *Reading, problem solving*

Allows the solving and creation of crossword puzzles that can be played on screen or paper via printer. Includes a variety of puzzles ranging in difficulty from 4 to 20 words. Children can solve puzzles by competing either with another player or with the computer. Uses both picture and word clues. Apple version requires frequent disk swapping. Requires adult help to get started. Supports mouse and color printer (optional). A good value.

MICKEY'S JIGSAW PUZZLES
Rating: **85** Ages: 5–up
Walt Disney Software (1991). $49.95.
IBM (VGA)
SP/2,7,8
Content: *Spatial problem solving*

Fifteen jigsaw puzzles with a variety of options. Child uses mouse (recommended) or joystick to drag puzzle pieces into place. When complete, puzzle can be animated or printed for coloring. Puzzles range from 4 to 64 pieces. Outlines, "peek" option, and optional timer included. Supports a variety of sound devices. Excellent design puts children in control.

MICKEY'S MAGIC READER
Rating: **75** Ages: 5–up
Sunburst Communications, Inc. (1989). $65.00.
Apple
LA/5,6
Content: *Reading for enjoyment*

Three activities in which child uses arrow keys and RETURN to (1) select one of three words to solve a riddle, (2) help Mickey Mouse bake cookies, or (3) help Goofy, Minnie, or Donald dress, by selecting clothing items. Each answer is rewarded by appropriate animation. Can be used with TouchWindow. Some reading required. Color monitor required. Limited content.

MICKEY'S RUNAWAY ZOO FUN WITH NUMBERS
Rating: **60** Ages: 2–5
Walt Disney Software (1990). $14.95.
IBM*, C64
NB/3
Content: *Counting from 1 to 9*

One simple counting activity. Five partially hidden numerals are scattered on the screen. By pressing one of the hidden numerals, child causes a corresponding number of animals to move into a zoo wagon one at a time, which promotes counting. Contains 18 animals on four screens. Good graphics. No design options. Limited range of content.

MICRO-LADS
Rating: **75** Ages: 2–up (special education)
Laureate Learning Systems (1984). $775.00.
Apple, IIGS, IBM
LA/1,8
Content: *Covers 46 fundamental syntactic rules*

Seven disks covering grammatical constructions. Individual disks may be purchased. Child hears sentence, e.g., "The dogs walk," and must pick correct picture (using keyboard, TouchWindow, SingleSwitch, or game controller). Keeps complete records. Adult must set up a lesson. Designed for learning disabled children. Requires an Echo speech synthesizer. Available in French.

MICROZINE JR. I (SEPT/OCT. '88)
Rating: **81** Ages: 6–9
Scholastic Software, Inc. (1988). $29.95 per issue.
Apple
CP/3,4 OT/1 CL/1 SP/5
Content: *Habitats, making masks, programming*

A former subscription series for 1988 and 1989 (five issues per year). Back issues are sold separately. Disks can be copied. This issue has four activities: (1) Mask Maker—child makes masks which can be printed. (2) Safari—child's decisions help animals survive. (3) Eye Spy—a "which doesn't belong" activity. (4) B.E.R.T.—child plays a question-and-answer game. Good design. Reading required.

MILK BOTTLES
Rating: **39** Ages: 3–6
Island Software (1982). $25.00.
Apple
NB/1
Content: *Comparing amounts*

Four numbered areas with differing amounts of white represent milk in bottles. Child types number of cylinder or touches bottle with light pen to answer question that is written below, e.g., "Which is full?" Not recommended.

MILLIE'S MATH HOUSE
Rating: **97** Ages: 2–6
Edmark Corporation (1992). $49.85.
Mac* (4.3MB), IBM
NB/1,3,4,5,8 SE/1,3,4 SP/4,7,8 CL/2 CP/4
Content: *Early math skills*

Child sees Millie, a talking cow, along with items representing six well-designed math and logic activities. Child can build a mouse house by matching shapes to a diagram, create simple sequences by sight or sound, count jellybeans used by a cookie machine, find sets (up to 10) shown on a cash register, match shoes to feet according to size, and decorate a bug. Design allows child to control the amount of structure in each activity. Management features enable adults to keep individual records and control the presentation.

MILLIKEN STORYTELLER, THE
Rating: **82** Ages: 4–7
Milliken Publishing Co. (1989). $49.95.
IIGS*, IBM (requires Covox for speech), Mac
LA/5,10 CP/1
Content: *Early reading skills*

Three stories: *The Ugly Duckling*, *Henny Penny*, and *Little Red Riding Hood*, consisting of 21 to 23 screens (pages). The text is read in a clear voice; child clicks the mouse to see next screen. Questions are asked, e.g., "Point to the acorn." Two of the screens can be colored with the mouse. Options allow for control over questions and speech. Clear graphics.

MIXED-UP MOTHER GOOSE
Rating: **80** Ages: 4–up
Sierra On-Line (1987). $39.95.
Apple*, IBM*, Mac, IIGS, Atari ST
SP/3,4,6,7 OT/1 CL/2
Content: *Nursery rhymes, using maps, memory practice*

Child uses arrow keys, mouse, or joystick to move a person in a village in search of items related to nursery rhymes. For example, finding a pail and taking it to Jack and Jill causes them to perform their rhyme with music and animation. Contains 18 rhymes. Games can be saved and continued later. Good level of child-control. Enjoyable and cleverly designed. CD-ROM version available.

MONEY WORKS
Rating: **76** Ages: 6–8
MECC (1987). $59.00.
Apple* (128K), IBM
NB/1,3
Content: *Money skills*

Four activities on one disk. Child uses arrows keys, ESCAPE, and RETURN to decide how much money is in a safe, count out an amount with a change machine, or make and print currency. Offers many teacher options. Correlates with many textbooks. Good child-control. The best money program we've seen.

MONKEY MATH
Rating: **49** Ages: 4–10
Artworx (1983). $19.95.
Apple*, C64, Atari
NB/4
Content: *Basic math facts, numerical order*

Provides drill and practice with math facts. Monkey knocks out correct answers on an assembly line to earn bananas and beat the clock. Practice with basic math facts (four operations) available at three levels.

MONSTERS & MAKE-BELIEVE
Rating: **69** Ages: 5–up
Queue, Inc. (1989) $49.95.
Apple (128K)*, IBM (CGA, 3.5"), Mac
CP/4 LA/3,6,9 SP/2,5
Content: *A graphics program with text-writing feature*

Child selects from a variety of clip art (arms, bodies, heads, props, etc.) to create monster scenes that can be saved or printed in color. Words can be added and spoken on Echo synthesizer (optional). Our five-year-olds liked the graphics but needed help to use the program. Graphics can be used with the older children's program *SuperPrint!* Available in Spanish.

MOPTOWN PARADE
Rating: **55** Ages: 6–10
The Learning Company (1981). $59.95 (school edition).
Apple*, IBM*, C64
CL/1,2,4 SE/4
Content: *Classification and seriation*

Contains seven progressively harder attribute games. Effective in focusing child's attention on attributes and the logic of sets. Strong in content. However, requires reading for independent use. Color monitor required. School edition includes back-up disk, teacher's guide, blackline masters, and activity ideas.

MOSAIC MAGIC
Rating: **79** Ages: 4–11
KinderMagic (1989). $35.00.
IBM* (CGA, VGA), Mac
SP/2,7,8,9
Content: *Spatial problem solving*

Child completes a mosaic-like picture that is presented with some pieces missing. Through use of a model or symmetry clues, a piece is first constructed by selecting the color, shape, and orientation. It is then moved into the picture. Contains 120 pictures that provide a nice range of challenge. Child also can create own pictures. Some menus require reading. No printing options. An excellent activity for encouraging simple geometric thinking.

MOUNT MURDOCH
Rating: **45** Ages: 5–up
Kidsview Software, Inc. (1987). $49.95 ($39.95 for C64).
Apple*, IBM, C64
LA/10
Content: *Adventure game and word processor*

An adventure game where child types simple commands (e.g., look, help, up) to get to Mount Murdoch. Uses large letters (19 across the screen). Permits the creation of custom games. Reading required.

MUPPET SLATE
Rating: **88** Ages: 5–7
Sunburst Communications, Inc. (1988). $75.00.
Apple
LA/9 OT/4
Content: *Language experiences*

A large-letter word processor with 126 pictures that can be added to the story. Stories can be saved and printed with ten borders. Not good for long stories. Options allow teacher control. Can be used with Muppet Learning Keys or regular keyboard. A separate printing utility called Big and Little ($59.00) allows creation of printouts from six inches to six feet. Story template kits are also available.

MUPPET WORD BOOK
Rating: **82** Ages: 3–6
Sunburst Communications, Inc. (1986). $65.00.
Apple*, IBM
LA/4,6 CL/1,2
Content: *Letters and words*

Six games on one disk provide practice with letters, upper/lower-case matching, beginning consonants, and word endings. The final activity is a simple word processor using large letters that can be printed. Can be used with a mouse, TouchWindow, Muppet Learning Keys, or regular keyboard.

MUPPETS ON STAGE
Rating: **81** Ages: 3–6
Sunburst Communications, Inc. (1984). $65.00.
Apple*, IBM, C64, Mac
LA/4 NB/4
Content: *Counting skills, letter recognition*

Three games: Discovery, Letters, and Numbers. Provides experience with letters, colors, numerals, and number. Well-designed. Is effective in giving child-control. This is the program that comes with the Muppet Learning Keys, although it can be used with a regular keyboard.

MUPPETVILLE
Rating: **87** Ages: 4–6
Sunburst Communications, Inc. (1986). $65.00.
Apple, IBM
CL/2 NB/3,4 OT/1
Content: *Classifying, memory skills*

Six activities on one disk, starring the Muppets. Menu design allows child-control. Supports TouchWindow (used for review), Muppet Learning Keys, mouse, or keyboard. Gives practice with shapes, colors, and numbers. Options allow for several difficulty settings.

MURAL MAKER
Rating: **58** Ages: 3–5
Mobius Corporation (1990). See *KidWare 2*.
IBM
CP/4
Content: *Creating printed products*

Child touches large arrows on a PowerPad overlay to select from 215 objects that can be displayed and printed in four sizes. Names of pictures can be spoken. Our children and teachers found it difficult to recognize the pictures, particularly the larger ones. Not recommended.

MUSIC
Rating: **59** Ages: 4–6
Lawrence Hall of Science (1984). $34.95.
Apple
CP/2 SE/1,4
Content: *Seriation of pitch*

Make Music, Note Sandwich, and Play a Tune give experience with an eight-tone C-scale, associating notes with numbers and colored bars of correlated lengths. Limited in content. Design is effective in giving child-control.

MUSIC MAKER
Rating: **65** Ages: 3–5
Mobius Corporation (1990). See *KidWare 2*.
IBM
CP/2 SE/1
Content: *Creation of music*

Child presses one octave (eight-block) scale on a PowerPad template (required) to hear a note, creating musical notes on the screen. Resulting music can be printed, played, or stored on disk. Limited design.

MY GRAND PIANO
Rating: **79** Ages: 3–8
GameTek/IJE, Inc. (1988). $9.95.
C64*, Apple, IBM
CP/2 SE/1
Content: *Learning notes and playing familiar songs*

A musical octave can be played using the bottom row of computer keys. One feature shows notes on a staff line as they are played and automatically plays them back. Includes a 33-song library from which selections can be played by following flashing keys. Some reading. Initial adult help will be required.

MY HOUSE LANGUAGE ACTIVITIES OF DAILY LIVING
Rating: **77** Ages: 3–up
Laureate Learning Systems (1991). $200.00.
Apple* (Echo synthesizer required), IIGS, IBM
LA/5
Content: *Practice with names of common objects*

Four activities based on 114 household objects and their functions: (1) Discover Names—select object to hear its name. (2) Discover Functions—select object to hear its function. (3) Identify Names—find a specific object. (4) Identify Function—child finds object based on its function. Can be used with single switch, TouchWindow, or regular keyboard. Includes many setup options.

MY LETTERS, NUMBERS, AND WORDS
Rating: **46** Ages: 2–6
Stone & Associates (1983). $39.95.
IBM*, Apple, Atari ST
LA/5
Content: *Letter recognition*

Practice with words, the numbers 1–10, key location, and letters, all reinforced through well-designed graphics and sounds. Design requires adult to start and stop the program, however. This program has later version called *Kid's Stuff* with better design features.

MY PUZZLES AND ALPHABET
Rating: **49** Ages: 3–8
Micro Power & Light Company (1986). $29.95.
IBM
LA/4,5 SP/2
Content: *Letter recognition, spatial relations*

Three activities dealing with letter recognition and a fourth on solving puzzles: (1) Child sees each letter animated in short routine. (2) Child presses any letter to see the associated animation. (3) Child must spell a word (e.g., kangaroo) to see the animation. (4) Child constructs puzzles of from 2–6 pieces to see animation. Menus require reading. Feedback can be confusing.

MY WORDS
Rating: **78** Ages: 5–8
Hartley Courseware (1987). $69.95.
Apple (64K), Mac
LA/2,3,4,5,9 CP/4
Content: *Language experience*

A talking word processor that keeps a list of every word used in a story. Lists can be stored, printed, and used again for other writing activities. While words are typed, they are also spoken in robotic voice (Echo speech synthesizer required). A mouse is recommended. Uses small (40-column) print.

NEW TALKING STICKYBEAR ALPHABET, THE
Rating: **64** Ages: 3–6
Optimum Resource, Inc. (1988). $49.95.
IIGS (512K, 3.5"), IBM with Covox or Echo
LA/4,5
Content: *Letter recognition*

Three activities come on two disks: (1) Alphabet—press any letter key to hear the letter and see an animated letter-related scene. There are 52 scenes available. (2) Letter Hunt—hear letter and find it to see a picture. Fast (3) Letters—press any letter key to hear the name. Clear graphics and speech. IBM version requires Covox or Echo.

NEW TALKING STICKYBEAR OPPOSITES, THE
Rating: **73** Ages: 3–6
Optimum Resource, Inc. (1986). $39.95.
Apple*, Atari, C64
SP/4 SE/1
Content: *Opposites, e.g., "near/far"*

Contains 21 antonym pairs that are changed using the arrow keys. Spacebar changes the scene. Colorful graphics and animation. Similar in design to *Inside Outside Opposites* and *City Country Opposites*. Employs speech if used with an Echo speech synthesizer. Easy to use.

NEW TALKING STICKYBEAR SHAPES, THE
Rating: **75** Ages: 3–6
Optimum Resource, Inc. (1989). $49.95.
IIGS (3.5"), IBM with Covox or Echo
SP/8
Content: *Identification of five common shapes*

Three activities: (1) Pick It—shows succession of 10 pictures, each one missing a shape, and child uses arrows or mouse to select shape to complete each picture. (2) Name It—a voice says, e.g., "Find the rectangle," and child selects it from five given shapes. (3) Find It—a voice says, "Find the circle," and child uses arrows to highlight circle in a given scene. Clever graphics and sounds. Somewhat limited content. IBM version requires Covox or Echo.

NOT TOO MESSY, NOT TOO NEAT
Rating: **89** Ages: 5–10
D. C. Heath & Company (1988). $75.00.
Apple
LA/2,3,5,9 CP/4 SP/4,7
Content: *Language experience*

Children use mouse, Koala Pad, joystick, or arrow keys to select or move objects, backgrounds, words, or characters of a story. They can also add their own words. Resulting stories can be saved and printed in color. Includes four copies of the storybook. Good design. Fun to use.

NOTABLE PHANTOM, THE
Rating: **66** Ages: 5–10
Compton's New Media (1984). $9.95.
Apple*, IBM, C64
SE/1 CP/2
Content: *Musical notation, pitch recognition*

Uses a plastic overlay to simulate a full 1½ octave keyboard for use with three activities. Effective in teaching note names and for playing and recording songs in a game context. Main menu is confusing. May require adult help to start younger child.

NOW YOU SEE IT, NOW YOU DON'T
Rating: **79** Ages: 8-11
Sunburst Communications, Inc. (1987). $75.00.
Apple
OT/1 CL/2,4,5 SP/4,8
Content: *Memory skills*

Child uses keyboard, TouchWindow, or Muppet keyboard to select answers. On disk 1, child is shown a set of objects to memorize, and then must identify one of the objects. On disk 2, child sees picture with, then without, one or more of its objects, and must identify what's missing. Some reading required.

NUMBER FARM
Rating: **78** Ages: 3–6
DLM (1984). $32.95.
Apple*, C64, IBM
NB/3,4,5,8
Content: *Counting skills*

Six entertaining games present multiple counting experiences. Feedback is effective. One game presents counting in a unique way by having child count sounds. Provides good number practice.

NUMBER SEA HUNT
Rating: **66** Ages: 3–6
Gamco Industries, Inc. (1985). $49.95.
Apple*, TRS 80, C64, IBM (CGA)
NB/2
Content: *Counting, adding, number order, subtraction*

Contains four multiple-choice activities using numbers up to 10. Activities include counting to 10, filling a partial number line, and adding and subtracting with object clues. Rather dry presentation. Good management features allow setting up lessons and keeping records for up to 200 children.

NUMBERMAZE
Rating: **81** Ages: 5–12
Great Wave Software (1988). $49.95.
Mac, IBM
NB/3,8 SP/4
Content: *Practice with basic math facts*

Child uses a mouse to navigate through a simple maze, answering math problems to remove roadblocks. Challenge levels (48 in all) range from counting objects to multiplication and division compu-tation. Password system keeps records for each child. Good for classroom use. Allows for individualized presentation. Good program.

NUMBERS
Rating: **58** Ages: 4–6
Lawrence Hall of Science (1984). $34.95.
Apple
NB/3,4,8
Content: *Numerical discrimination, counting*

Provides two activities: (1) Balloons—lets the child pop balloons in relation to a number on the keyboard, using spacebar and RETURN. (2) Secret Numbers—reveals parts of numerals for the child to identify. Well-designed. Best for kindergarten.

OBSERVATION AND CLASSIFICATION
Rating: **80** Ages: 3–5
Hartley Courseware (1985). $45.95.
Apple
CL/1,2,4
Content: *Classification skills*

Three activities. Child selects which object is different from others, which is the same size as one shown, or which belongs to the same class as a group shown, e.g., "all animals." Teacher options allow control over sound, movement of cursor, and number of plays per game. Child selects own difficulty level.

ODD ONE OUT
Rating: **74** Ages: 3–10
Sunburst Communications, Inc. (1983). $65.00.
Apple*
CL/1,2,4
Content: *Matching/discrimination*

Consists of five games based on format of selecting one of four boxes that doesn't belong. Child presses first letter of the color of the box containing the odd shape, e.g., "B" for blue. Content accessible to teacher.

OLLIE AND SEYMOUR
Rating: **77** Ages: 3–up
Hartley Courseware (1984). $49.95.
Apple
CL/2 SP/4,6,8 TI/1 OT/1
Content: *Pedestrian safety, readiness skills*

A unique simulation in which child uses arrow keys to move "Ollie" around a park and through the streets, where he can practice safe street crossings, obeying traffic signals, or games. Games involve shape and color matching, Concentration with traffic signs, and stacking and counting blocks.

OLLIE BEGINS IT
Rating: **64** Ages: 3–up
S.R.A. (1985). $49.95.
Apple
LA/6
Content: *Matching beginning sounds and letters*

A multiple-choice-style program in which child matches letters with objects (e.g., "D" with dog) using arrow keys and RETURN. Structured lessons have four steps: demonstration, practice, testing, and worksheets (included). A simple record-keeping system shows which letters have been matched. Menu requires reading. No escape from activities.

OLLIE COMPARES IT
Rating: **64** Ages: 3–up
S.R.A. (1985). $49.95.
Apple
LA/4,6 CL/2

Content: *Avoiding common letter reversals*

A multiple-choice-style program in which child matches two letters or two three- or four-letter words, using arrow keys and RETURN. Structured lessons have four steps: demonstration, practice, testing, and worksheets (included). A simple record-keeping system shows which problems have been successfully completed. Menu requires reading. No escape from activities.

OLLIE FINDS IT !
Rating: **67** Ages: 3–6
S.R.A. (1985). $49.95.
Apple
CL/2
Content: *Matching shapes, letters, and words*

Shows child an object, a shape, a letter, or a word. Child uses arrow keys and RETURN to select a match from three choices. There are four steps to each lesson: demonstration, practice, testing, and worksheets (included). Keeps success/failure records. Rather dry presentation. No escape from activities.

OLLIE HEARS AND REMEMBERS
Rating: **64** Ages: 3–up
S.R.A. (1985). $49.95.
Apple
CL/2 OT/1
Content: *Auditory memory skills*

Child hears one to three objects (or letters) named and then uses arrows and RETURN to select a corresponding sequence of pictures (or letters) on the screen. Adult can select criteria for success. Records if a child passes or fails. Contains 30 pictures. Uses a clear voice. Echo synthesizer is required. Dry presentation. No escape from activities.

OLLIE HEARS AND SEQUENCES
Rating: **64** Ages: 3–up
S.R.A. (1985). $49.95.
Apple
CL/2 OT/1
Content: *Auditory memory skills*

Two or three objects or letters are named (e.g., pear and light-bulb), and child uses arrows and RETURN to select the corresponding pictures in correct order. Adult can select criteria for success. Records if a child passes or fails. Contains 30 pictures. Uses a clear voice. Echo speech synthesizer is required. Little child-control.

OLLIE LETTERS IT
Rating: **64** Ages: 3–up
S.R.A. (1985). $49.95.
Apple
LA/4 CL/2
Content: *Matching upper- and lower-case letters*

A multiple-choice-style program in which child sees a letter and must find its upper- or lower-case match using arrow keys and RETURN. Structured lessons have four steps: demonstration, practice, testing, and worksheets (included). A simple record-keeping system shows which letters have been successfully matched. Menu requires reading.

OLLIE MATCHES IT
Rating: **64** Ages: 3–up
S.R.A. (1985). $49.95.
Apple
LA/4 CL/2
Content: *Matching beginning and ending letters*

A multiple-choice-style program in which child matches two short words that start or end with the same letter or letters, using the arrow keys and RETURN. Structured lessons have four steps: demonstration, practice, testing, and worksheets (included). A simple record-keeping system shows which letters have been successfully matched. Menu requires reading.

OLLIE NUMBERS IT
Rating: **64** Ages: 3–up
S.R.A. (1985). $49.95.
Apple
NB/4 CL/2
Content: *Numeral/set association*

A multiple-choice-style program in which child matches numbers less than 10 with sets, using arrow keys and RETURN. Structured lessons have four steps: demonstration, practice, testing, and worksheets (included). A simple record-keeping system shows which letters have been matched. Menu requires reading.

OLLIE REMEMBERS IT
Rating: **66** Ages: 3–6
S.R.A. (1985). $49.95.
Apple
OT/1 CL/2
Content: *Visual memory*

Shows child up to three objects or letters for 1–10 seconds, then covers them up. Child must use the arrows to select those same objects from another set. Keeps success/failure records. Dry presentation. Adult can set difficulty level. Includes demonstration, practice, and test modes. No escape from activities.

OLLIE REMEMBERS NUMBERS I
Rating: **66** Ages: 3–6
S.R.A. (1985). $49.95.
Apple
OT/1 CL/2
Content: *Visual memory*

Shows child three to five numbers for up to 10 seconds, then covers them up. Child must use the arrows to select those same numbers from another set shown on screen. Keeps success/failure records. Dry presentation. Adult can set difficulty level. Design allows no escape from activities.

OLLIE SEQUENCES IT I
Rating: **66** Ages: 3–6
S.R.A. (1985). $49.95.
Apple
OT/1 CL/2
Content: *Visual memory*

Shows child two or three objects (or letters) for up to 10 seconds, then covers them up. Child uses the arrows to select those same objects (or letters) from another set, in the order they were first presented. Keeps success/failure records. Dry presentation. Adult can set difficulty level. Menu requires reading. Allows no escape from activities.

ONCE UPON A TIME . . .
Rating: **59** Ages: 6–12
Compu-Teach (1987). $49.95.
IBM* (256K), Apple IIGS (128K), Mac
LA/1,3,4,5,8,9
Content: *Language experience, creation of storybooks*

Consists of three sets of about 30 objects from the farm, safari, or main street. Child creates picture by typing the names of objects and moving them with the arrow keys. Pictures can be printed or saved. Reading required. Includes colored pencil set. Design could be improved. Two additional volumes are available. Volume I deals with underwater, dinosaurs, and animals; Volume II covers medieval times, Wild West, and outer space.

ONE BANANA MORE
Rating: **34** Ages: 5–6
Data Command (1984). $39.95.
Apple
CL/2 NB/1 LA/4,5
Content: *Reading readiness, counting*

Six multiple-choice activities in which a child sees an object and presses the numeral of a matching shape, letter, size, word, number, or set, depending on the level selected. Bananas are rewards. No escape. Menu requires reading.

OPERATION: MATHMINE
Rating: **76** Ages: 5–9
Milliken Publishing Co. (1987). $34.95.
Apple
NB/2,3,5,6,7 SP/4
Content: *Logical thinking, problem solving, basic facts*

Child uses direction keys (JKRF) to move a robot through a series of rooms in search of a treasure. To advance the robot to the next room, a logic puzzle must be solved by moving sets of blocks found in units of 1 to 8 to fill in holes of corresponding depths. Adult management features allow tracking of children's scores and progress at various levels. Robot is rather slow moving. Offers a range of challenges.

PAINT WITH WORDS
Rating: **73** Ages: 3–7
MECC (1986). $39.95.
Apple (64K)
LA/5 CP/1,4
Content: *Word recognition*

Using mouse, joystick, or keyboard, child creates a scene by moving one of eight words to a spot on the screen, where it becomes a picture that is a part of the scene. Scenes can be printed, saved, or changed. Twelve word-sets can be created from 124 words. Ufonic speech synthesizer (optional) will say words.

PARQUETRY AND PICTURES
Rating: **76** Ages: 3–6
Hartley Courseware (1989). $45.95.
Apple
SP/1,2,6,8 CL/2
Content: *Visual perception, parts and wholes, directions*

Contains three activities. The first two provide a multiple-choice format whereby a child selects a puzzle piece to fill in a picture (e.g., a car outline) or a geometric shape. In the third, scenes are created by using the arrow keys to move and place objects. Easy-to-use menus allow child to select own difficulty level.

PATH-TACTICS
Rating: **69** Ages: 5–11
MECC (1986). $59.00.
Apple*, IBM, C64
NB/3,5,6
Content: *Counting, basic math facts*

A strategy game in which child does a math problem to decide how many steps a robot must move to get to a finish point in the least amount of steps. Levels range from counting to division (e.g., 63 / ___ = 7). Teacher options allow control over presentation of content. Child can play against partner or computer. Enjoyable program.

PATTERNS
Rating: **79** Ages: 5–6
MECC (1988). $39.95.
Apple
CL/1,2 SE/1,2 CP/1
Content: *Pattern recognition: shapes, sounds, movements*

Three activities that give practice with static, sound, or animated patterns. A fourth activity allows the creation of pattern designs. Teacher options allow modification of content. Good design, child-control, and range of content.

PATTERNS AND SEQUENCE
Rating: **72** Ages: 3–6
Hartley Courseware (1984). $45.95.
Apple
CL/1 SE/1
Content: *Matching/discrimination*

Contains four clearly designed activities that provide large objects, positive feedback, and multiple skill levels. No reading required.

PEANUTS MAZE MARATHON
Rating: **46** Ages: 4–8
Queue, Inc. (1984). $29.95.
Apple*, IBM
TI/4 SP/4
Content: *Problem solving (mazes)*

Peanuts cartoons animate themselves after the completion of simple maze. Use with the keyboard is not smooth; a joystick is recommended. Time is kept for each maze.

PEANUTS PICTURE PUZZLERS
Rating: **59** Ages: 4–8
Queue, Inc. (1984). $29.95.
Apple*, IBM
SP/1
Content: *Problem solving (puzzles)*

Presents a picture to the child, then makes a puzzle by dividing it into sections. After the child puts all the pieces into the puzzle, the picture becomes animated. Entertaining program. Could be difficult for 4-year-olds to operate, however.

PERCEPTION, INC.
Rating: **71** Ages: 5–8
IRI Group (1989). $185.00.
Apple
CL/3,4,5,6 SE/2
Content: *Problem solving and thinking skills*

Child uses mouse, arrow keys, or joystick to steer a robot around a nine-room factory to play three activities: (1) Assembly Line—child makes a part that satisfies four "attribute" criteria. (2) Quality Control—child sees part and sorts it by attribute. (3) Packaging—child fills in grid by matching attributes. Three difficulty levels.

PERFECT FIT
Rating: **70** Ages: 3–8
GameTek/IJE, Inc. (1988). $9.95.
Apple, IBM*, C64
SP/1,4,8 CL/2
Content: *Spatial relationships and picture recognition*

A puzzle game in which child uses arrows or joystick (optional) to move a puzzle piece onto a board containing three to five silhouettes of letters, numbers, and Fisher-Price toys (30 available). Can be set for play against a clock. For one or two players. Harder levels require flipping puzzle pieces. Some adult help required to get started.

PETER'S GROWING PATTERNS
Rating: **73** Ages: 5–up
Strawberry Hill Software (1985). $19.00.
Apple
SE/1,2,3,4 CL/6 SP/9 NB/5 CP/4
Content: *Pattern recognition*

Six activities that range in difficulty and present visual and numerical patterns. Child uses joystick or keyboard to select or construct the next member of a given sequence. Teacher's edition ($55.00) includes many classroom activities. "U-Design-It" feature allows creation of new pattern problems.

PHONICS PLUS
Rating: **78** Ages: 4–8
Stone & Associates (1988). $39.95.
IBM
LA/4,5,6
Content: *Letter/word relationships*

Six activities in which child sees picture and types the starting, middle, or ending letter; selects a word to match picture; selects vowel to match word; or creates words by typing the starting letters of a series of pictures. Also includes a word-search game and a crossword puzzle using simple words. Enjoyable activities. Picture menus allow child-control.

PHONICS PRIME TIME: INITIAL CONSONANTS
Rating: **83** Ages: 5–6
MECC (1986). $59.00.
Apple
LA/4,5,6
Content: *Initial consonant phonics skills*

Two activities on one disk: (1) Frog Frolics—child uses spacebar to select a picture that goes with a given letter (e.g., G = Girl). (2) Puppet Show—child sees a picture and a sentence with a blank and selects a picture to complete sentence. Contains 193 pictures. Allows for customized lessons. Keeps records for 75. Good for classroom use.

PICTURE CHOMPERS
Rating: **79** Ages: 5–6
MECC (1990). $49.00.
Apple*
CL/1,2,3,6
Content: *Classification practice*

Child uses arrows or joystick to move a set of "chompers" around a 4 by 4 grid filled with pictures of items. The object is to select items that share an attribute such as size, color, shape, design, class, or use. Timer and scoring options are available. There are three difficulty levels. Minimal reading required. An enjoyable activity.

PICTURE PARADE
Rating: **63** Ages: 5–7
Hartley Courseware (1988). $49.95.
Apple
TI/6
Content: *Ordering of events*

Child sees two to six pictures that form an ordered sequence but are placed out of order, e.g., the steps involved in a boy diving into the water. Child puts pictures in correct order by placing a number under each box. Contains 48 sets of picture sequences, some difficult to interpret. Menu requires reading. Keeps records for up to 48 children.

PICTURE PERFECT
Rating: **79** Ages: 4–up
MindPlay (1984). $49.99.
Apple*, IBM
CP/1 LA/3
Content: *Draw, color, and write*

Child uses joystick or mouse to draw points, lines, or boxes and to write text. Features include a 72-picture library, five color selections, and drawing tool options. Drawing requires going between two screens, which is difficult for young children. Pictures can be saved and printed.

PICTURES, LETTERS, AND SOUNDS
Rating: **78** Ages: 5–6
Hartley Courseware (1986). $45.95.
Apple
LA/4,5
Content: *Letter recognition*

Five games offer a range of activity. Child can type using picture symbols for letters (e.g., Saw = S), pop balloons, or position X's or O's in a game of tic-tac-toe. Design allows child-control.

PIP
Rating: **83** Ages: 5–8
Intellimation (1990). $35.00.
Mac (Hypercard stack) System 6.05, HD
LA/1,2,3,4,5,8
Content: *Experimenting with words*

Child sees Pip, a movable character, waiting on the screen. Typing in an action word, such as "walk," causes Pip to walk across the screen, with accompanying stepping sounds. Pip understands 155 words and 95 different actions. Management features enable adults to add custom words and motions. Children as young as 4 like to try to guess Pip's actions. See *Podd* for a program based on the same idea.

PLAYROOM, THE
Rating: **91** Ages: 3–6
Broderbund Software (1989). $49.95.
IBM, Mac* (color version now available), Apple
LA/4,5 NB/2,3,8 TI/6,9 SP/2 CP/4
Content: *Letters, numbers, and time*

Child uses mouse (recommended) or keyboard to explore a room full of objects. Six of the objects trigger activities, including ones on counting, clocks, combining parts, letters, upper/lower-case, and words. Promotes child-control by making it easy for child to enter or exit a range of activities. Easy to use. Incorporates some speech. Apple version requires frequent disk changes. Uses copy protection puzzle. Highly recommended.

PLAYWRITE
Rating: **82** Ages: 6–11
Sunburst Communications, Inc. (1990). $75.00.
IIGS (1 MB)
LA/3,8,9
Content: *Writing scripts*

A script-writing program featuring two talking puppets. A child types in the puppet dialog and uses pop-up menus to incorporate one of eight special effects (e.g., canned laughter, a drum roll, a curtain rising). Stage sets and costumes can be changed. Scripts can be saved, printed, and played back. Uses IIGS's internal speech capacity. Fun program. Limited features.

PODD
Rating: **75** Ages: 5–8
Wings for Learning/ Sunburst Communications (1990). $65.00.
Apple*, IBM
LA/8 TI/6
Content: *Fun with verbs, sequences*

Child can experiment with a round face (Podd) by typing in a word that fits the sentence, such as "Podd can _____." If the word is one of the preprogrammed routines Podd knows, the word will be illustrated via a short animated routine. Contains another activity that allows three to five of Podd's actions to be linked in sequence. Rather slow in loading. See *Pip* for a similar type of program for the Mac.

POINT TO PICTURES
Rating: **80** Ages: 2–up
R. J. Cooper & Associates (1991). $75.00 (Free preview copy).
Apple (Echo and TouchWindow)
LA/3,6
Content: *Vocabulary resource*

Child sees one to nine pictures on the screen or overlay (depending on the setup). Touching the picture results in related animation and sounds. Offers two modes of use: (1) You Find, in which child is asked to find a specific object, and (2) I Show, You Find, in which child is shown an object and told to find it before entering a choice. Management features offer adults a range of control over the presentation. Works with most touch devices. Echo required. For use in special education settings.

PRESCHOOL IQ BUILDER I
Rating: **38** Ages: 3–6
Queue, Inc. (1982). $34.95.
Apple*
CL/2 LA/4
Content: *Concepts of same and different*

Contains seven lessons in which the child presses the S or L key to indicate if the two objects on the screen are the same or different. Lessons range from colors (color monitor required) to letters. Provides little range of challenge or child-control.

PRESCHOOL IQ BUILDER II
Rating: **43** Ages: 3–6
Queue, Inc. (1984). $34.95.
Apple*
CL/2 LA/5
Content: *Matching, shapes, numbers, letters*

Contains six lessons, all with same format showing model object at top of screen. To receive smile face, child uses spacebar and arrow keys to move model object to a mate at the screen bottom. Records are kept.

PRESCHOOL PACK
Rating: **79** Ages: 3–6
Nordic Software, Inc. (1989). $69.95.
Mac (1 MB, hard disk recommended)
CL/2 NB/3 LA/4,6 OT/1
Content: *Letters, numbers, and shapes*

Four activities on two disks: (1) ShapeWorks—child uses mouse to match shapes, letters, or numerals. (2) AlphaWorks—child matches pictures with letters. (3) Counting—child counts 1 to 20 objects. (4) Block Math—child adds with sets of blocks. Also contains 20 dot-to-dot puzzles and a Concentration game. Clear graphics. Uses digitized speech.

PRIMARY EDITOR PLUS
Rating: **74** Ages: 5–up
EduQuest (1988). $99.00.
IBM PS/2
LA/9 CP/1,4 OT/4
Content: *Word processing, drawing, making banners*

Three programs: Picture Editor allows a child to draw in color, using arrows or mouse. Banner Maker prints banners in three different sizes of type. Primary Editor is a 40- or 80-column word processor with spell checker, eight screen colors, block move, copy, and others. Menus and stories can be read aloud using the PS/2's built-in speech synthesizer.

PRINCESS AND THE PEA, THE
Rating: **89** Ages: 5–up
William K. Bradford Publishing (1989). $75.00.
Apple* (3.5" or 5.25"), IBM
LA/3,8,9 NB/3 SP/1,2,4,7 CP/1,4
Content: *Creative writing*

Contains three parts: (1) Story Teller—child reads through a story. (2) Story Maker—child creates own story or scenes, using animated objects or own text. (3) Activities—contains story-starters, a house-building activity, a crown-making activity, and a puppet kit. Mouse recommended. Good design, graphics. No sound. Can print in color with an Imagewriter II. Some reading required.

PRINCESS AND THE PEA: EXPLORE-A-STORY PLUS
Rating: **83** Ages: 5–12
William K. Bradford Publishing (1992). $75.00.
Mac (color, HD)
LA/3,9 CP/4 SP/7
Content: *Exploring stories, creating printed products*

An electronic flannel-board-like activity that allows child to navigate throughout a story by clicking on arrow icons. Items in each scene can be easily rearranged, replicated, or deleted; new ones can be added. Text can be added at any point, simply by typing. Text windows can also be added. No sound is used. Contains several activities such as story-starters, matching, or building. Clever design. Work can be printed or saved. Young children will need help with file access/saving.

PRINT POWER
Rating: **46** Ages: 6–up
Hi Tech Expressions (1989). $12.70.
Apple (128K)
CP/4 LA/9
Content: *Creating printed materials*

A printing program featuring 60 graphics, 20 borders, and seven type faces in three sizes. Can make cards, banners, signs, or stationery. Design makes it difficult to use. Reading required. Young children require assistance. Similar in design to *Sesame Street Print Kit*.

PRINT SHOP, THE
Rating: **85** Age: na
Broderbund Software (1987). $54.95.
Apple*, Mac, IBM, C64, Atari, IIGS*
CP/1,4
Content: *Creation of printed materials*

An easy-to-use printing program that includes 120 graphic elements. Good for teacher use. Allows the creation of greeting cards, signs, letterheads, or banners. Includes 6 envelopes and 20 sheets of colored paper. Four Print Shop Graphics Libraries can be purchased separately for $24.95. Prints in color.

PROFESSOR AL'S SEQUENCING LAB
Rating: **64** Ages: 5–12
Micrograms, Inc. (1990). $39.95.
Apple
TI/6
Content: *Sequencing pictures and sentences into temporal order*

Consists of two disks. Disk A contains 20 picture sets, each of which includes four pictures in scrambled order. A child uses the spacebar and RETURN to number the correct sequence. Menu requires reading. Disk B contains 40 short stories. Story is shown, and then child is shown selected sentences and must put them in correct order. Can be somewhat confusing at first.

PUSS IN BOOT
Rating: **34** Ages: 3–6
Island Software (1982). $25.00.
Apple
SP/4
Content: *Spatial concepts*

Gives practice with 14 "positional concepts," such as below, above, in, out. Some concepts not presented accurately in a two-dimensional presentation. Limited content. Poorly designed. Not recommended.

PUZZLE MASTER
Rating: **79** Ages: 4–up
Queue, Inc. (1984). $34.95.
Apple*
SP/1,2 CP/1,4
Content: *Problem solving (puzzles)*

Child uses joystick or arrow keys either to select 1 of 30 pictures or to create own, which can be scrambled and reassembled using icons. Offers hints if needed. Puzzles can be saved on disk. Child can select puzzles of varying difficulty (2–800 pieces). No reading required.

QUARTER MILE, THE
Rating: **79** Ages: 5–up
Barnum Software (1987). $50.00.
Apple, IBM (network version available)
NB/4
Content: *Math fact practice, numeral and letter matching*

Child "races" against five other dragsters by entering correct responses to a math or letter problem. The child's own best scores are represented by the competing dragsters, so children can race against their own performance. Specialized versions are available which cover 102 topics, from numeral and letter recognition to algebra. Scores can be saved. Requires some reading.

RABBIT SCANNER, THE
Rating: **67** Ages: 2–5
E.C.S. (1986). $39.95.
Apple
TI/1,3 CL/2
Content: *Eye tracking, matching*

A simple program designed to provide practice scanning. Child watches a rabbit move across the screen and presses spacebar when the rabbit is over a carrot. Level of challenge can be adjusted by changing distractors, speed of rabbit, starting position. Requires adult setup.

RACE THE CLOCK
Rating: **69** Ages: 5–12
MindPlay (1984). $49.95.
Apple*, IBM
LA/5 OT/1
Content: *Memory*

Concentration game with animated pictures. Child is given an amount of time to use joystick, mouse, paddles, or arrow keys to match pairs: picture/picture, picture/word, or word/word. Flexible design allows control of difficulty.

RAINBOW PAINTER
Rating: **80** Ages: 4–12
Queue, Inc. (1984). $34.95.
Apple*
CP/1 SP/9
Content: *Drawing*

Presents an electronic coloring book in which the colors can be selected and filled in. Menus are easy to use. A free-draw option contains "mirror drawing" activity. Offers range of activities that child can control.

READ, WRITE, & PUBLISH 1
Rating: **81** Ages: 6–up
D. C. Heath & Company (1988). $99.00.
Apple* (128K), IBM
LA/1,2,3,4,5,9 CP/1,4 SP/1,4
Content: *Word processing and story illustrating*

Child uses keyboard or mouse to select and move objects, words, or characters and then write about them. Three two-sided disks contain eight story topics with pull-down menus that contain word files and over 35 theme-related objects each. Stories and pictures can be saved or printed in color. Story disks can be copied. Mouse recommended. Available in Spanish.

READ-A-LOGO
Rating: **70** Ages: 4–up
Teacher Support Software (1987). $149.95.
Apple (network version available), IBM
LA/3,4,5,6,9
Content: *Use of commercial logos to practice reading skills*

Child first types name and personal information, such as family names, pets, etc., and then plays one of six activities that incorporate 24 popular logos, such as McDonald's, Coke, and Pizza Hut, with the child's personalized words. Reading required, although text can be spoken with a Slotbuster speech synthesizer. Includes many support materials.

READER RABBIT
Rating: **71** Ages: 5–7
The Learning Company (1984). $39.95.
Apple*, IBM, C64, Mac, IIGS ($59.95)
LA/4,5 OT/1
Content: *Basic reading skills/comprehension*

Four activities in which child uses spacebar, joystick, or paddles to match letters of C-V-C words, unscramble letters to create words, create word ladders, or play one of seven levels of Concentration. Uses over 200 lower-case three-letter words. Apple IIGS version says words.

READER RABBIT'S READY FOR LETTERS
Rating: **90** Ages: 3–5
Learning Company, The (1992). $59.95.
IBM (floppy or HD)
CL/2,3,4,5,6 LA/4,8 SP/2
Content: *Matching, sorting, patterns, letters, word meanings*

Five well-designed activities: (1) Grandma's Kitchen—find ingredients to make a recipe. (2) Mix & Match Bedroom—redecorate a bedroom. (3) ABC Bathroom—multiple-choice letter-matching activity with spoken feedback and two ability-levels. (4) Picture Parlor—select picture to match a sentence. (5) Grandpa's Workshop—match an item based on shape and color.

READINESS FUN
Rating: **70** Ages: 2 ½–6
Access Unlimited (1989). $25.00.
Apple
TI/1,2
Content: *Cause and effect, scanning*

Designed for special education settings. Two activities: (1) Cause and Effect Clown—child sees a large face, presses any key to see an expression, e.g., a wink or a frown. (2) Fun With Scanning—child sees two objects, one still and the other moving, and presses any key when they are next to each other.

READING AND ME
Rating: **79** Ages: 4–7
Davidson and Associates, Inc. (1987). $39.95.
Apple* (128K), IBM, IIGS ($49.95)
CL/2,4 LA/4,5,6,7
Content: *Matching, classifying, recognizing letters & words*

Twelve activities include matching shapes, letter recognition, upper/lower case, alphabetical order, rhyming words, picture/word matching and completing a sentence. In each, child uses mouse or arrow keys to select one of four boxes in a multiple-choice format. Good design. Talking version for IIGS gives spoken feedback.

READING ADVENTURES IN OZ
Rating: **80** Ages: 4–9
Davidson and Associates, Inc. (1992). $59.95.
IBM (SB, HD 6MB)
LA/4,5,6,7 SP/4
Content: *Basic reading skills*

Child uses mouse to explore 42 different screens, each with approximately 15 items, en route to the land of Oz. Selecting an item shows its word label, with sound and animation. Three levels of difficulty. In the more difficult levels, child completes a task related to the scene, such as "Find one word made of two words." When all answer words are collected, child can get into the Oz castle. Graphics sometimes not related to original Oz theme. Fun to use, plenty of opportunities for child-control.

READING COMPREHENSION: LEVEL 1
Rating: **82** Ages: 6–7
Houghton Mifflin Co. (1988). $174.00.
Apple (64K)
LA/5,6,8
Content: *Reading comprehension skills*

Child uses spacebar, arrow keys, and RETURN to page through a story in which comprehension questions are asked through an Echo speech synthesizer (required). Uses clear voice. To assist reading, child can select and listen to any word in the story. Sixteen stories come on eight disks. Keeps records. Good design.

READING FUN: BEGINNING CONSONANTS
Rating: **56** Ages: 5–6
Troll Associates (1985). $39.95.
Apple
LA/4,6
Content: *Beginning consonants*

Child uses spacebar and RETURN to identify objects that start with the same sound, start with different sounds, or start with a given letter. Offers little child-control. Allows teacher to select letters, set the difficulty level, and set the number of problems.

READING FUN: FINAL CONSONANTS
Rating: **56** Ages: 5–6
Troll Associates (1989). $39.95.
Apple
LA/4,6
Content: *Final consonants*

Child uses spacebar and RETURN to identify objects that start with the same sound, start with different sounds, or start with a given letter. Offers little child-control. Allows teacher to select letters, set the difficulty level, and set the number of problems.

READING FUN: VOWEL SOUNDS
Rating: **46** Ages: 6–7
Troll Associates (1990). $39.95.
Apple
LA/6,7
Content: *Long and short vowel sounds*

Two activities: (1) Crazy Crayons—child sees a word (e.g., axe) and uses the spacebar and the number keys to select and color in pictures that start with that letter. (2) Brush Ups—child sees two words (e.g., drum and cup) and indicates (Y or N) if the words have the same vowel sound. Rigid design limits child-control. Not recommended.

READING HELPERS
Rating: **69** Ages: 5–6
Houghton Mifflin Co. (1986). $135.00.
Apple (64K)
LA/1,4,6,8 CL/2
Content: *Reading skills*

Five disks. Child presses any key to make selections in 11 games based around decoding and encoding, sight vocabulary, letter recognition, memory, thinking skills, matching, words in context, and alphabetical order of words. Content best for grade 1 and above. Initial adult help required.

READING 1
Rating: **79** Ages: 3–6
Queue, Inc. (1985). $39.95.
Apple*
LA/4,5,6 TI/6
Content: *Letters, letter sounds, and words*

Child uses arrow keys or joystick to move Peter Rabbit to his home. On the way, Peter matches letters, sounds, and vowels. Contains four levels. Clear graphics, enjoyable activities. In some games, words are "spoken," but voice is hard to understand (extra synthesizer not required).

READING MACHINE, THE
Rating: **65** Ages: 5–8
SouthWest EdPsych Services (1982). $59.95.
Apple
LA/4
Content: *Various language skills*

Separate activities (28) that range from matching letters to phonics practice (cassette interface available). Good management options allow teacher to set up lessons, diagnose progress, or keep records for up to 60 children. Blocky graphics.

READING STARTERS
Rating: **63** Ages: 5–6
Houghton Mifflin Co. (1986). $135.00.
Apple (64K)
LA/4,5,6,7,8 CL/2 SP/4
Content: *Reading skills*

Child use six animals' names, Deb, Jip, Sam, Ben, Meg, and Tim, to play games based on encoding and decoding, sight vocabulary, letter recognition, memory, matching, alphabetizing, and positional words. Eighteen games on five disks offer a broad range in content. Keeps score. Initial adult help required.

READINGMAZE
Rating: **74** Ages: 3–7
Great Wave Software (1991). $49.95.
Mac
LA/4,5,6,10 SP/4,6
Content: *Basic language skills*

Child uses mouse or arrow keys to move through a maze in search of hidden objects. To pick up an object, child must answer a series of language skill questions. Child moves to a more difficult level after mastering current one. Matching pictures, letters/pictures, and words/pictures, following instructions (e.g., "Put the rake over the barn"), and unscrambling sentences are covered in up to 70 levels. Rather dry presentation. Tracks progress for up to 50 students.

REPRESENTATIONAL PLAY
Rating: **71** Ages: 2–5
P.E.A.L. Software (1985). $150.00.
Apple (64K)
LA/1,5 SP/7
Content: *Early language acquisition*

Two overlays for the Muppet Learning Keys (required). Child first plays with real toys, then presses their pictures on the overlay to hear the associated words in a robotic voice. Requires Echo speech synthesizer. Covers 24 words. Adult setup required.

ROBOT WRITER PLUS
Rating: **69** Ages: 6–13
Queue, Inc. (1990). $49.95.
Apple*, IBM
CP/4 LA/3,6,9 SP/2,5
Content: *A graphics program with text-writing feature*

Child selects from a variety of clip art (e.g., arms, bodies, heads, props) to create robot scenes that can be saved or printed in color. Words can be added and spoken on Echo synthesizer (optional). Our five-year-olds liked the graphics but needed help to use the program. Pages can be printed in seven sizes.

ROSIE THE COUNTING RABBIT
Rating **89** Ages: 5–10
D. C. Heath & Company (1988). $75.00.
Apple (128K), Mac LC
LA/2,3,5,9 NB/3 CP/4 SP/4,7
Content: *Language experience*

Children use mouse, Koala Pad, joystick, or arrow keys to select or move objects, backgrounds, words, or characters of a story. Children can also add their own words. Resulting stories can be saved and printed in color. Includes four copies of the storybook. Good design. Fun to use. Mac LC version includes word processor.

ROSIE THE COUNTING RABBIT: EXPLORE-A-STORY PLUS
Rating: **83** Ages: 5–12
William K. Bradford Publishing (1992). $75.00.
Mac (color, HD)
LA/3,9 CP/4 SP/7
Content: *Exploring stories, creating printed products*

A flannel-board-like activity that allows child to navigate throughout a story by clicking on arrow icons. Items in each scene can be easily rearranged, replicated, or deleted; new ones can be added. Text can be added at any point, simply by typing it in. Text windows can also be added. No sound is used. Contains several activities such as story-starters, matching, or building. Clever design. Work can be printed or saved. Young children will need help with file access/saving.

RUMPELSTILTSKIN
Rating: **43** Ages: 5–8
Troll Associates (1987). $39.95.
Apple
LA/10 SP/4
Content: *Reading comprehension*

Three games: (1) Sequencing—child puts eight sentences from *Rumpelstiltskin* in 1-2-3 order. (2) Tic-tac-toe—child answers T/F question to win a square. (3) Following Directions—child moves a marker in a scene, according to written directions, then creates a pattern. Best for ages 6 and up. Includes book.

RUN RABBIT RUN
Rating: **70** Ages: 4–8
E.C.S. (1988). $39.95.
Apple
TI/1,3,5
Content: *Scanning, directionality, and attention*

Child practices visual skills and timing by helping a rabbit through an obstacle course. Correct timing is required to jump over obstacles. Teacher options permit control of rabbit's speed, length of course, and number of obstacles. Can be used with joystick, paddle switches, or keyboard.

SAME AND DIFFERENT
Rating: **64** Ages 3–6
Access Unlimited (1989). $25.00.
Apple
CL/2
Content: *Matching*

Two straightforward activities: (1) Which Is the Same?—child sees two objects and indicates when they match. (2) Which Is Different?—child sees three objects, one of which is different from the other two, and uses an arrow to select the one that is different. Child uses spacebar and RETURN to enter answers. Program can be set on scan mode for use with single switch.

SAME OR DIFFERENT
Rating: **55** Ages 4–8
Merit Software (1985). $24.95.
Apple*, C64
CL/1,2
Content: *Visual discrimination, matching*

Child presses a number key to select which of four numbered objects is different from the others in some way or which of four objects matches one shown. Menus require reading. Offers a narrow range in content. Keeps score.

SCANNING FUN
Rating: **72** Ages: 3–6
Access Unlimited (1989). $25.00.
Apple
TI/1,2
Content: *Visual scanning*

Designed for special education settings. Four activities in which child uses a regular (or alternate) keyboard, or single switch, to indicate when a moving object is next to another. Very easy to use. Somewhat distracting reinforcements. Options allow for adjusting scanning speed. Color monitor advised.

SCHOOL BUS DRIVER
Rating: **73** Ages: 3–8
Gametek/IJE, Inc. (1988). $9.95.
IBM*, Apple, C64
SP/4,6 TI/4,8 NB/3
Content: *Coordination, judgment, and recall of details*

Child uses arrow keys or joystick (optional) to move a bus through a 15-screen country neighborhood to pick up six children scattered at six bus stops and drop them off at the school. There are four levels of play. Harder levels include road blocks and a timer to work against. Easy to use. No reading required. Limited in content.

SCHOOL MOM
Rating: **54** Ages: 4–16
Software Excitement! (1991). Shareware.
IBM (CGA)
LA/4 TI/9 CP/1,2 NB/4
Content: *Basic skills practice*

A range of activities covering six subjects: (1) Music—a hard-to-use activity in which child uses letter keys to create notes on a staff line. (2) Art—five simple drawing programs. (3) Spelling—five drill activities from upper/lower-case letters to spelling lists (can be customized). (4) English—tutorials and drill on parts of speech. (5) Time—analog clock drill. (6) Math—set/numeral matching, base ten, and an enjoyable math facts game.

SENTENCE MASTER LEVEL 1
Rating: **75** Ages: 5–8
Laureate Learning Systems (1990). $475.00 per level.
Apple (Echo synthesizer required)
LA/5, 6, 8
Content: *Reading skills, vocabulary development*

Eight stories with corresponding word-activity disks and story booklets. Each word is first taught in drill format. Then the story can be read, with help from the synthesizer if necessary (requires Echo). Finally, story booklets permit independent reading in a print format. Story vocabulary is carefully sequenced according to difficulty, making story content rather dry. Allows adult control over presentation.

SESAME STREET ASTRO-GROVER
Rating: **41** Ages: 3–6
Hi Tech Expressions (1984). $9.95.
Apple, IBM, C64*
NB/3,4
Content: *Counting, adding, and subtracting*

Consists of five games that provide practice counting, adding, and subtracting objects in an "outer space" context. Lively graphics and sounds not related to content. Includes keyboard overlay. Apple version compatible with Muppet Learning Keys.

SESAME STREET BIG BIRD'S SPECIAL DELIVERY
Rating: **31** Ages: 3–6
Hi Tech Expressions (1984). $9.95.
C64*, IBM, Apple
CL/2
Content: *Object recognition*

Consists of a multiple-choice format in which child uses arrow keys to match one of four pictures according to form (easiest), class, and function (hardest). Menu requires reading.

SESAME STREET CRAYON: LETTERS FOR YOU
Rating: **80** Ages: 3–up
Merit Software (1987). $14.95.
Apple* (128K), IBM, C64, Amiga
CP/1,4 SP/4
Content: *Coloring pictures*

A coloring program with 30 blank Muppets scenes. Child moves cursor with mouse, joystick, or arrow keys to fill in sections of a picture with 1 of 16 available colors. Prints in color. Mouse and color monitor recommended. Very easy to use. Prints picture with calendar.

SESAME STREET CRAYON: NUMBERS COUNT
Rating: **80** Ages: 3–up
Merit Software (1987). $14.95.
Apple* (128K), IBM, C64, Amiga
CP/1,4 SP/4
Content: *Coloring pictures*

A coloring program with 30 number pictures. Child moves cursor with mouse, joystick, or arrow keys to fill in sections of a picture with 1 of 16 available colors. Prints in color. Mouse and color monitor recommended. Very easy to use. Prints picture with calendar.

SESAME STREET CRAYON: OPPOSITES ATTRACT
Rating: **80** Ages: 3–up
Merit Software (1987). $14.95.
Apple* (128K), IBM, C64, Amiga
CP/1,4 SP/4
Content: *Coloring pictures*

A coloring program with 30 number pictures. Child moves cursor with mouse, joystick, or arrow keys to fill in sections of a picture with 1 of 16 available colors. Prints in color. Mouse and color monitor recommended. Very easy to use. Prints picture with calendar.

SESAME STREET ERNIE'S BIG SPLASH
Rating: **59** Ages: 4–6
Hi Tech Expressions (1985). $9.95.
C64*, IBM
SP/4,7
Content: *Planning, predicting, problem solving*

Using function keys, child builds path that transports Rubber Duckie from his soap dish to Ernie's bathtub. The path is made by choosing squares that will move Duckie to Ernie. Three levels. Program takes three minutes to load from disk. Limited content.

SESAME STREET ERNIE'S MAGIC SHAPES
Rating: **45** Ages: 3–6
Hi Tech Expressions (1984). $9.95.
C64*, Atari, IBM, Apple
CL/1,2
Content: *Visual discrimination practice*

In all of the six shape- and color-matching games, child uses two arrow keys to decide if a shape or color matches one shown. Features Ernie, who nods feedback and brings new shapes. Provides little interaction or variety. Color monitor required.

SESAME STREET FIRST WRITER
Rating: **81** Ages: 4–up
Hi Tech Expressions (1989). $14.95.
Apple* (128K), IBM
LA/4,5,9 CP/4 OT/4
Content: *Writing & printing words, sentences, and stories*

A word-processing program that allows the creation of text in two sizes (large and small) and three colors (white, green, and blue). Includes an on-screen list of 36 words that can be customized. Does not have features, such as word wrap, that could be confusing to a child. Text can be saved or printed.

SESAME STREET GROVER'S ANIMAL ADVENTURES
Rating: **76** Ages: 4–6
Hi Tech Expressions (1985). $9.95.
C64*, IBM
CL/2
Content: *Classifying animals*

Child uses joystick to move Grover to one of four environments. Pressing joystick button adds animals or objects. Each environment is divided into land, sky, and water areas. Child must place animal in appropriate area.

SESAME STREET LEARNING LIBRARY 1
Rating: **Not rated** Ages: 3–6
Hi Tech Expressions (1985). $24.95.
Apple, IBM, Nintendo
NB/3,4 CL/1,2
Content: *Matching, counting, adding, subtracting*

A combination of three separate programs—*Sesame Street: Astro Grover*, *Ernie's Magic Shapes*, and *Big Bird's Special Delivery*. Includes a 12-page teacher guide. See reviews of individual Sesame Street programs.

SESAME STREET LEARNING LIBRARY 2
Rating: **Not rated** Ages: 3–6
Hi Tech Expressions (1985). $24.95.
IBM, Nintendo
CL/2 SP/4,6,7
Content: *Problem solving, classifying animals*

A combination of three separate programs—*Sesame Street: Ernie's Big Splash*, *Grover's Animal Adventures*, and *Pals Around Town*. Includes a 12-page teacher guide. See reviews of individual Sesame Street programs.

SESAME STREET LETTER-GO-ROUND
Rating: **56** Ages: 3–7
Hi Tech Expressions (1984). $9.95.
C64*, IBM, Atari, Apple
LA/4,5 TI/1,3
Content: *Letter matching*

Child presses spacebar to stop and start ferris wheel, to match upper/lower-case letters, or to spell three-letter words. Good graphics and sounds. Menu requires reading. Includes keyboard overlay.

SESAME STREET PALS AROUND TOWN
Rating: **73** Ages: 4–6
Hi Tech Expressions (1985). $9.95.
C64*, IBM
SP/4,6,7
Content: *Community exploration*

Child uses joystick (required) and function keys to explore and add objects to one of five scenes, e.g., a playground, a schoolroom, Sesame Street, Bert and Ernie's house, and downtown. Good graphics and sound. Disk version takes about three minutes to load. Color monitor recommended.

SESAME STREET PRINT KIT
Rating: **46** Ages: 3–up
Hi Tech Expressions (1988). $14.95.
Apple*, IBM, C64, Atari
CP/4 LA/9
Content: *Creating printed materials*

A printing program featuring 60 Sesame Street characters, 20 borders, and 7 typefaces in 3 sizes. Can make cards, banners, signs, stationery, or storybook. Design makes it difficult to use. Reading required. Young children will require assistance.

SHAPE & COLOR RODEO
Rating: **73** Ages: 4–8
DLM (1984). $32.95.
Apple*, IBM, C64
CL/1
Content: *Recognizing shapes and colors*

Six activities. Child uses spacebar and RETURN to select matching shapes or colors or to find hidden shapes in a rodeo picture. Lively graphics and sounds. Menu requires reading. For one or two players.

SHAPE STARSHIP
Rating: **65** Ages: 3–6
Gamco Industries, Inc. (1986). $49.95.
Apple*, C64, TRS 80, IBM
CL/1,2,3 SE/4

Content: *Matching attributes of shape and size*

Child uses spacebar to move pointer in four multiple-choice-style activities in which child (1) matches objects of same shape and size but different color, (2) matches objects of same color and shape but different size, (3) decides what shape goes next in a series, or (4) matches object with a similar shape. Repetitive format. Good management options can keep up to 200 individual records.

SHAPES & PATTERNS
Rating: **66** Ages: 3–6
Mindscape, Inc. (1984). $61.00.
Apple
CL/1,2 SE/2
Content: *Visual discrimination, cognitive skills*

Child uses nodding heads to decide (1) if shapes shown are the same, (2) if there is a common shape among several objects, or (3) if pattern is correct. Easy-to-use format. Utilities provide feedback on last-played round and some selection of difficulty level.

SHUTTERBUG'S PATTERNS
Rating: **36** Ages: 4–8
Merit Software (1985). $24.95.
Apple*, C64
CL/2
Content: *Sequencing, pattern recognition*

Child sees a series of eight pictures and must select the ninth and tenth of the series. Graphics are distracting. Content is limited.

SHUTTERBUG'S PICTURES
Rating: **61** Ages: 4–8
Merit Software (1985). $24.95.
Apple*, C64
OT/1
Content: *Memory skills, reading readiness*

One game in which child sees picture, then is flashed the same picture with one element missing. Child uses the number keys to select the missing object. No branching.

SIGHT WORD SPELLING
Rating: **39** Ages: 6–7
E.C.S. (1987). $39.95.
Apple
LA/4,5 NB/4 OT/1
Content: *Letter, word, and numeral recognition*

Designed for first- and second-grade special education students, this program presents 10 words or numbers on the screen, one at a time, and pronounces them (Echo speech synthesizer required). The child must type what is shown. Poor design. Keeps records. Custom word lists can be created and stored.

SILLY LETTERS & NUMBERS
Rating: **70** Ages: 3–6
Access Unlimited (1988). $25.00.
Apple
LA/4 NB/4 CL/2 OT/3
Content: *Letter and numeral recognition*

Five simple activities that use large, cartoon-style letters or numerals. Child uses keyboard to match letters or numerals, fill the screen with silly numerals, find a given letter on the keyboard, or freely type with a choice of two large, customized typefaces. Can be used with regular or alternate keyboards.

SIMON SAYS
Rating: **80** Ages: 6–11
Sunburst Communications, Inc. (1987). $65.00.
Apple*, IBM
OT/1 SE/4
Content: *Chaining memory exercise*

Child must re-create sequences of colors, numbers, or letters, which get longer with each correct answer. Options allow child to create the original sequence, select the speed with which it is flashed, or select the letters used. Uses regular keyboard, Muppet keyboard, or Touch-Window. Can be played by one to four players.

SIMPLE ADDITION
Rating: **69** Ages: 3–6
Access Unlimited (1988). $25.00.
Apple
NB/3,4,7
Content: *Addition with sums less than nine*

Two straightforward addition activities: (1) Adding Dinosaurs—child first counts two sets, then adds them together. (2) Dragon Addition—child sees addition equation and enters answer. Incorrect answers prompt the appearance of a set that a child can count for help. Easy to use though limited in content.

SIMPLE CAUSE AND EFFECT
Rating: **73** Ages: 3–6
Access Unlimited (1989). $25.00.
Apple
TI/1,2
Content: *Cause and effect*

Six simple activities in which a child presses the spacebar or a single switch to create colors on the screen, build a robot one part at a time, fill the screen with colored boxes, randomly draw a design, create a colored pattern, or move a shape across the screen. Easy to use. Color monitor recommended.

SIZE AND LOGIC
Rating: **77** Ages: 3–6
Hartley Courseware (1984). $45.95.
Apple
SE/1,2,4 CL/1
Content: *Size discrimination, patterns*

Four games in which child uses spacebar and RETURN to match objects by size, select the object that comes next in a series, or create a matching set. Three levels to each game. Child can use picture menu to select own difficulty level. Clear graphics.

SLEEPY BROWN COW, THE
Rating: **89** Ages: 5–10
D. C. Heath & Company (1988). $75.00.
Apple
LA/2,3,5,9 CP/4 SP/4,7
Content: *Language experience*

Children use mouse, Koala Pad, joystick, or arrow keys to select or move objects, backgrounds, words, or characters of a story. They can also add their own words. Resulting stories can be saved and printed in color. Good design. Fun to use.

SNAPDRAGON
Rating: **83** Ages: 2½–6
MECC (1992). $49.95.
Mac, IBM*
CL/1,2,3 CP/4 LA/3
Content: *Classification, discovery, coloring*

Two open-ended activities allow child to use a mouse (recommended) or arrow keys to discover a set of up to ten hidden objects in one of six scenes: hiking, underwater, bathtime, farm, space, and bedtime. Provides a nice setting for classification learning experiences. A camera icon saves the scene to a "scrapbook" file that can be viewed later or printed. A coloring book allows a child to color 12 outlines (50 colors), which can also be printed. An easy-to-use starter program.

SNOOPY'S GAME CLUB
Rating: **79** Ages: 3–8
Accolade (1992). $49.95.
IBM (Sound card)
LA/4,6 CL/2,5 SP/4,7 TI/8
Content: *Problem solving and observation skills*

Three clever activities: (1) Snoopy's Animated Puzzles — nine animated Snoopy scenes are randomly divided into parts. Child uses mouse or arrows to put the scene back together. (2) Charlie Brown's Picture Pairs — a concentration game using one of eight decks of picture or letter cards. A correct match causes the letter to be announced and shows animation. (3) Woodstock's Lookalikes — advancing in difficulty, this activity asks child to distinguish 2 items from a set of up to 18. Clever graphics enhance traditional games, which vary in quality.

SOCPIX
Rating: **61** Ages 3–7
American Guidance Service (1985). $49.95.
Apple
CL/2,4
Content: *Classification (class membership)*

Three activities on one disk. Child uses arrow keys and spacebar to decide whether pictures belong to a given category. Includes 175 pictures in 7 categories. A separate record-keeping program ($19.95) keeps records for 40 children.

SOUND IDEAS: CONSONANTS
Rating: **80** Ages: 5–6
Houghton Mifflin Co. (1986). $165.00.
Apple (64K)
LA/4,5,6
Content: *Consonant sounds*

Seven disks present the "th," "sh," and "ch" and 17 consonants. There are four levels. Child matches a sound (said by synthesizer) with a picture, a letter, or a word by using spacebar and RETURN to select a box in a multiple-choice format. Includes workbook and other materials. Requires Echo speech synthesizer.

SOUND IDEAS: VOWELS
Rating: **80** Ages: 5–6
Houghton Mifflin Co. (1986). $165.00.
Apple (64K)
LA/4,5,6
Content: *Five vowel sounds (long, short) and y*

Five disks. Child uses spacebar and RETURN to select one of three objects with the same vowel sound as a picture. Uses spoken and pictorial examples to illustrate letter/sound correspondence. Includes workbook and other support materials. Requires Echo speech synthesizer.

SOUND IDEAS: WORD ATTACK
Rating: **72** Ages: 5–6
Houghton Mifflin Co. (1987). $174.00.
Apple (64K)
LA/4,5,6
Content: *Consonant blends, clusters and digraphs*

Six disks. Each disk has three parts: a tutorial, a practice session, and a story. Successful completion of each part is required to get to the next level. Practice session gives child a choice of three games to play. Story puts phonics in sentence context. Workbook and support materials included. Provides verbal feedback. Requires Echo speech synthesizer.

SPELL-A-WORD
Rating: **69** Ages: 2–up
R. J. Cooper & Associates (1991). $75.00 (free preview copy).
Apple
LA/7,8
Content: *Practice spelling words*

A talking large-print spelling program (Echo required). Child first types letters of a simple word that is shown. Next, the word is typed with no letter outlines. If this is done correctly, child can color a picture. Stores three groups of five words up to nine letters long. Management options enable adults to keep records for each child. Effective use of speech, although program seems sluggish at times. Designed for use in special education settings.

SPELLICOPTER
Rating: **66** Ages: 6–10
Compton's New Media (1983). $39.95.
Apple*, IBM, C64 ($29.95)
LA/5 SP/4
Content: *Spelling practice*

Child pilots helicopter (using joystick or arrow keys) over obstacles to pick up scattered letters of a spelling word. A sentence is given for a clue. Up to 400 words are available (40 lists of 10 words).

SPELLING AND READING PRIMER
Rating: **51** Ages: 4–8
Compton's New Media (1982). $39.95.
Apple*, IBM, C64
LA/5
Content: *Spelling and reading practice*

Two activities: (1) Reading Primer—child uses spacebar to move cursor to match word with one of three line drawings. (2) Spelling Primer—child sees drawing and must type in word. Twenty-two word lists with 350 words ranging from "pin" to "circle." Keeps a running record for one child.

SPELLING BEE, THE
Rating: **32** Ages: 5–6
Troll Associates (1985). $39.95.
Apple
LA/5
Content: *Spelling skills*

Consists of a book, disk, and cassette tape. Three games: (1) Child sees three words, e.g., fan/me/mine, and selects one that is different; (2) child changes word to match picture; and (3) child matches picture to word. Reading required. Limited content. Cluttered graphics.

STARS & PLANETS
Rating: **62** Ages: 3–6
Advanced Ideas, Inc. (1989). $44.95.
IIGS*, IBM (3.5" or 5.25")
NB/3 CL/2 SE/1 CP/4
Content: *Counting, planets, prereading, creativity*

Six activities about planets and stars. Child uses keyboard to (1) match planets, (2) put planets in order by orbit, (3) match constellation outline or word, (4) control a robot to match rockets, (5) gather and count moon rocks, or (6) match planets with their written names. Design limits child-control. Good sound, graphics. Does not use mouse.

STEPPING STONES BONUS PACK
Rating: **58** Ages: 5–7
CompuTeach (1987). $49.95.
Apple*, IBM, Mac
LA/4,5,6 NB/3,4
Content: *Vocabulary, counting, adding*

Three activities on two disks: (1) Language—Child uses spacebar to select pictures of elements of a sentence, which animates itself if correct. (2) Reading—child matches pictures and words. (3) Arithmetic—child counts up to 24 objects and enters answer. Menus require reading.

STICKERS
Rating: **79** Ages: 4–12
Queue, Inc. (1984). $34.95.
Apple, IBM* (CGA)
CP/1,4 SP/1,2,8
Content: *Creative activity*

Using arrow keys or joystick, child moves geometric shapes on screen to either match existing patterns or create own. Easy-to-use picture menu requires no reading. Keyboard or joystick can be used.

STICKYBEAR ABC
Rating: **59** Ages: 3–6
Optimum Resource, Inc. (1982). $39.95.
Apple*, Atari, C64
LA/4
Content: *Letter recognition*

Child presses any letter key to get one of two animated pictures related to letter. Easy-to-use program, but little challenge. Entertaining graphics. Talking version available for Apple IIGS (see *The New Talking Stickybear Alphabet*).

STICKYBEAR MATH
Rating: **81** Ages: 6–9
Optimum Resource, Inc. (1984). $39.95.
Apple*, IBM, C64
NB/3,4,7
Content: *Counting, addition, subtraction*

A 20-level math program that keeps names, levels, scores, and types of problems for up to 25 children. Automatically tracks and adjusts difficulty level. Content ranges from counting to three-place vertical-presentation subtraction with borrowing. Includes poster and stickers. Animated graphics illustrate problems.

STICKYBEAR NUMBERS
Rating: **75** Ages: 3–6
Optimum Resource, Inc. (1987). $39.95.
Apple*, IBM, C64
NB/3,4,7,8
Content: *Counting from 0 to 9*

Child uses spacebar or number keys to see sets of colorful objects. Pressing the 4 key, for example, causes four bouncing balls to appear. Spacebar causes balls to disappear, one at a time. Each time a number key is pressed, a new set of objects (20 possible) appears. Entertaining graphics. Easy to use. Numbers are spoken if Echo speech synthesizer is used.

STICKYBEAR PRINTER
Rating: **43** Ages: 5–up
Optimum Resource, Inc. (1985). $49.95.
Apple
CP/4 OT/4
Content: *"Printing fun for everyone"*

Allows creation of cards, stories, or posters. Multiple-menu design requires reading, limiting independent use by nonreaders. Can utilize Imagewriter II color printer. A second package, *Stickybear Printer Picture Library* ($39.95), contains two disks of additional graphics.

STICKYBEAR READING
Rating: **77** Ages: 5–8
Optimum Resource, Inc. (1984). $39.95.
Apple*, IBM, C64
LA/5,8,10
Content: *Word and sentence fun*

Three activities: Child can use joystick, arrow keys, or mouse to match words with pictures, complete a sentence, or build a sentence by selecting its parts. Graphics animate each sentence or word used. Includes 32-page book and poster.

STICKYBEAR SHAPES
Rating: **70** Ages: 3–6
Optimum Resource, Inc. (1983). $39.95.
Apple*, Atari, C64, IBM
SP/8
Content: *Shape identification*

The Stickybear series offers a book, a poster, and suggestions for extending concepts into noncomputer contexts. This program provides practice with five common shapes in three games: Pick It, Name It, and Find It. Paddles, arrow keys, or mouse can operate program. IBM version uses Covox Speech Adapter.

STICKYBEAR TOWN BUILDER
Rating: **80** Ages: 6–9
Optimum Resource, Inc. (1984). $49.95.
Apple*, C64, IBM
SP/3,4,6,7 TI/5,6 CL/2
Content: *Map skills*

Using joystick or arrow keys, child makes a town by placing 1 of 30 buildings on an empty map. The child can then drive car to find buildings in a matching game or to find hidden keys in the town. Towns can be saved. Joystick and color monitor recommended.

STICKYBEAR TYPING
Rating: **42** Ages: 6–up
Optimum Resource, Inc. (1985). $49.95.
Apple*, IBM, C64
LA/4
Content: *Typing skills*

Three activities give child practice with (1) finding letters with correct fingers, (2) building speed, and (3) typing stories. Includes 30 levels of difficulty, records scores, and gives WPM score. Slow key/screen response. Reading required.

STICKYBEAR'S READING PROGRAM
Rating: **80** Ages: 4–8
Optimum Resource, Inc. (1992). $59.95.
Mac (5.9MB)
LA/1,5,6,8
Content: *Reading skills in English and Spanish*

Four activities: (1) Word Bob—a six-level, arcade-style game. Child presses spacebar to shoot passing pictures or words to see and hear their names. (2) Word Match—child hears a sentence, such as "Find the dog," and must select the word or picture from six choices. (3) Word Find—a simple sentence is illustrated. Child fills in the blank by selecting a word. (4) Sentence Builder—an open-ended activity where child can build silly sentences and see them enacted. Keeps records. Spanish-language options available. Rather slow animation at times.

STONE SOUP
Rating: **89** Ages: 5–up
William K. Bradford Publishing (1989). $75.00.
Apple*, IBM (3.5" or 5.25")
LA/3,8,9 NB/3 SP/1,2,4 CP/1,4
Content: *Creative writing*

Contains three parts: (1) Story Teller—presents clever version of the *Stone Soup* story. (2) Story Maker—child uses mouse or keyboard to create and print, in color, versions of original stories. (3) Activities—includes story-starters, a treasure-hunt, recipes, and a puppet kit. No sound. Excellent design puts the child in control of a wide range of content.

STONE SOUP: EXPLORE-A-STORY PLUS
Rating: **83** Ages: 5–12
William K. Bradford Publishing (1992). $75.00.
Mac (color, HD)
LA/3,9 CP/4 SP/7
Content: *Exploring stories, creating print products*

A flannel-board-like activity that allows a child to navigate throughout a story by clicking on arrow icons. Items in each scene can be easily rearranged, replicated, or deleted; new ones can be added. Text can be added at any point, simply by typing. Text windows can also be added. No sound is used. Contains several activities such as story-starters, matching, or building. Clever design. Work can be printed or saved. Young children will need help with file access/saving.

STOP, LOOK, AND LISTEN!
Rating: **64** Ages: K–3
Educational Activities, Inc. (1992). $69.95 per unit.
IBM (Ani-Vox I/O Board, microphone, headset)
CL/1,2,4 LA/3,4 NB/3 TI/9
Content: *Visual discrimination, upper/lower-case letters, numbers, and reading clocks*

Four units, each containing approximately 120 flashcard-like frames covering a range of basic skills. Child is first shown a screen and asked a question, such as "Which one doesn't belong?" The computer then digitally records the child's vocal response (note hardware requirements), which can be played back or saved on disk. Responses are not formally corrected. Content seems rather dry. Clear speech sounds.

STORYBOOK THEATRE
Rating: **87** Ages: 6–up
Wings for Learning/Sunburst Communications (1992). $129.00.
Mac
LA/3,4,5,8,9
Content: *Creating and printing stories*

Children's storybook with three themes: mad scientists, animals, and playrooms. Starting from a blank page, child uses mouse and picture menus to select from 58 objects and animated text windows. Microphone option allows voice recording. Page editor makes it easy to move, print, or copy pages. Contains clear, attractive graphics and sounds. High in child-control, although start-up sequence is complex. For similar program for IBM, see *Storybook Weaver.*

SUPER GS AWARD MAKER
Rating: **Not rated** Ages: na
Orange Cherry Software (1990). $59.00.
IIGS
CP/4
Content: *Teacher's utility printing award certificates*

Sixty-six ready-made award certificates for language arts, science, social studies, physical education, math, achievement, sports, library, art, music and drama, holidays, miscellaneous. Each has a blank space for name and date. Awards can be printed in black and white or in color with an Imagewriter II printer.

SUPERPRINT FOR THE MACINTOSH
Rating: **86** Ages: 6–up
Scholastic Software, Inc. (1991). $119.95.
Mac (2.9MB)
CP/1,4
Content: *Creation of printed materials*

A printing program for banners, cards, calendars, and posters. Clip-art library contains 165 items, covering a range of holidays and interests. The poster option contains nine frame styles and ten scenes, such as a map of the United States. Comes with special fonts (TrueType) for smoother lines (not required for System 7). Printing options allow a range of sizes. Design makes it easy to use, but younger children will still need assistance.

SURROUNDING PATTERNS
Rating: **77** Ages: 3–10
Strawberry Hill Software (1985). $19.00.
Apple*, C64
SP/1,2,3,4,8,9 CP/1,4
Content: Visual imagery, symmetry

Child sees a pattern of colored shapes and uses joystick or arrow keys to copy it. Seven levels are available, or child can make own designs, which can be saved. Program design is easy to use and encourages experimentation.

TALK ABOUT A WALK
Rating: **56** Ages: 4–6
Queue, Inc. (1984). $39.95.
Apple
LA/1,5 CL/2 SP/6
Content: *Classifying household objects*

Two activities in which child sees 1 of 20 household items or words (spoon) and must place it in one of four rooms of a house. The second activity shows objects inside or outside a house. Child must press any key to indicate if the object is in the correct place.

TALKING ABC'S
Rating: **43** Ages: 3–7
Orange Cherry Software (1988). $59.00.
IIGS (512K, 3.5")
LA/4 CL/2
Content: *Letter recognition*

Two disks—one for the letters A–M, the other for N–Z. Contains three activities: (1) Child presses any letter to hear letter name and see letter-related picture. (2) Child sees picture, hears letter, and must press a key. (3) Child sees on-screen keyboard, hears letter name, and must press that key. Limited content.

TALKING ALPHA CHIMP
Rating: **84** Ages: 3–7
Orange Cherry Software (1989). $59.00.
IIGS*, IBM (3.5")
LA/4 NB/3 TI/6
Content: *Letter recognition, counting*

Three activities on two disks. Alphabet Board—child clicks the mouse on a letter, sees a related picture, and gives the letter name. Number Tree—child clicks on a numeral, sees a corresponding sequence of events. Alphabet Story—child hears a letter named, presses its key, and sees and hears corresponding animation and sounds. Good graphics and sounds.

TALKING ANIMALS ACTIVITY SET
Rating: **74** Ages 4–9
Orange Cherry Software (1989). $59.00.
IIGS
CL/1 NB/3 CP/1
Content: *Matching six animals with their sounds, creating pictures*

Four activities: (1) Animal Sounds—child clicks mouse on one of six animals to hear its sound. (2) Animal Rescue—a confusing game in which child "saves" animals by matching an animal with its sound. (3) Animal Count—a limited activity in which child counts animals in a barnyard. (4) Animal Builder—child combines animal parts and can color or print the result. Clear sounds and graphics. Some reading required.

TALKING CLASSROOM
Rating: **75** Ages: 4–7
Orange Cherry Software (1990). $49.95.
IIGS (1 MB), IBM (Covox)
LA/4 TI/9 SP/6 CP/1
Content: *A variety of school-related subjects*

Eight limited activities on two disks. Child uses mouse to click on a coin or dollar to see its equivalent in change; set the hands of a clock; press a letter key to hear the letter's name; match days of the week (spoken with written); watch an egg or cocoon hatch; click on a world map to learn about continents; color one of five line drawings; or print related worksheets. Some reading required. Uses clear speech and graphics. Requires disk swapping.

TALKING CLOCK
Rating: **65** Ages: 5–8
Orange Cherry Software (1988). $59.00.
IIGS* (512K, 3.5"), IBM
TI/9
Content: *Clock-reading skills*

Child sets the hour, minute, and second hands on a clock by clicking mouse on one of two arrows. Uses pull-down menus to access options. Limited content. Reads time from clock and provides feedback statements in digitized speech. Reading required.

TALKING COLORS AND SHAPES
Rating: **49** Ages: 4–7
Orange Cherry Software (1989). $59.00.
IIGS (3.5")
CL/2 SP/8
Content: *Basic colors and shapes*

Two disks—one for colors and one for shapes. Each disk contains five activities that include selecting a shape or color and then hearing its name, matching colors or shapes ("find the square"), or filling in outlines of shapes with colors. Good speech and graphics. Poor range of content and design. Not recommended.

TALKING DINOSAURS
Rating: **53** Ages: 5–9
Orange Cherry Software (1989). $59.00.
IIGS (3.5")
NB/3
Content: *Dinosaur names, counting*

Child clicks mouse on one of five dinosaurs to hear its name, finds the hidden dinosaurs in a picture, counts colored dinosaur bones and enters numeral (from 1 to 9), or fills in a dinosaur picture with one of four colors. Can also print four dinosaur outlines. The limited content and poor design diminish the value of the clear graphics and digitized speech.

TALKING FIRST READER
Rating: **63** Ages: 5–8
Orange Cherry Software (1989). $59.00.
IIGS (one 3.5" disk)
LA/5,8
Content: *Word sounds*

Five activities in which child uses mouse to select one of three words (in lower-case) to match a picture, to select a word to end a sentence, or to move a bouncing ball along a sentence and thus hear each word. Each sentence is cleverly illustrated with good graphics. However, children lose interest quickly.

TALKING FIRST WORDS
Rating: **62** Ages: 4–7
Orange Cherry Software (1990). $49.95.
IIGS
LA/4,5,6,8
Content: *Recognize and create words*

Five activities on two disks. (1) Child clicks on one of 18 action word cards to see a related animated sequence. (2) Child clicks on one of 32 noun word cards to hear word and see picture. (3) Child types missing letter after seeing a picture and listening to the word. (4) Child solves five simple word riddles. (5) Child clicks on a sentence-ending to match a picture. Excellent graphics and speech. Menu requires reading.

TALKING FIRST WRITER
Rating: **74** Ages: 6–9
Orange Cherry Software (1989). $59.00.
IIGS (3.5")
LA/3,5,6,8,9,10
Content: *Experiment with words and sentences*

Three activities. In the first two, a child sees a picture and creates a three-word sentence (five-word, in level two) by selecting words with the mouse. The third activity (see picture) is the most fun, presenting 20 words a child can experiment with. Logical word combinations are illustrated and read in clear, digitized speech. Limited content.

TALKING MONEY
Rating: **60** Ages: 5–9
Orange Cherry Software (1989). $59.00.
IIGS (3.5")
NB/3,7
Content: *Units of money*

Five activities in which child uses the mouse to select a coin or bill, to hear its name, or to see its value (e.g., 1 dollar = 4 quarters). Child can match coins or bills with one of three amounts up to $10.00 or can select the correct amount of change for a purchase. Cumbersome design diminishes value of excellent graphics and clear digitized speech.

TALKING NOUNS I
Rating: **80** Ages: 2½–up
Laureate Learning Systems (1987).
$130.00.
Apple (128K), IBM
LA/5,8 CL/1,2
Content: *Language development*

Four activities include picture matching, picture identification, nouns by category, and interactive communication. During interactive communication, child presses a picture on an overlay for the TouchWindow or PowerPad (one is required) to hear its name in a clear voice (Echo synthesizer required). Other words allow creation of simple sentences, such as "See the bus." Fifty nouns are available. Recommended for nonverbal children. Adult setup available.

TALKING NOUNS II
Rating: **80** Ages: 2½–up
Laureate Learning Systems (1987).
$115.00.
Apple (128K), IBM
LA/5,8 CL/1,2
Content: *Language development*

Same as *Talking Nouns I*. Provides 50 additional nouns.

TALKING NUMBERS
Rating: **41** Ages: 5–7
Orange Cherry Software (1988). $59.00.
IIGS (one 3.5" disk)
NB/4,8
Content: Counting

Four activities on one disk: (1) Child presses any number key to see and hear the number. (2) Child hears a number and must press its key. (3) Child hears and sees the computer count. (4) Child sees and hears number and must click mouse on the correct answer. Very limited content. Some reading required.

TALKING READING RAILROAD
Rating: **54** Ages: 5–9
Orange Cherry Software (1989). $59.00.
IIGS (3.5")
LA/4,5,6,8
Content: *Consonant and vowel sounds*

Two disks with four activities: (1) Child uses a mouse to match words with vowel sounds. (2) Child unscrambles a five-word sentence. (3) Child completes sentences by choosing one of three words. (4) Child hears the parts of a locomotive identified as mouse clicks on them. Limited content, same with each use. Requires "midstream" change of disk.

TALKING SCHOOL BUS
Rating: **77** Ages: 5–8
Orange Cherry Software (1989). $59.00.
IIGS*, IBM
SP/7 NB/3 CL/2
Content: *Directions, counting, animal sounds, and colors*

Consists of four simple activities on two disks: (1) Bus Route—clicking mouse on directions moves a bus and picks up 4 children. (2) At the Aquarium—a set of 1 to 10 fish are shown and counted by clicking on a number line. (3) Farmer's Market—produce items are found and colored in. (4) On the Farm—animals are matched with their sounds. Clear speech, sounds, and graphics. Limited content.

TALKING SPELLER
Rating: **64** Ages: 5–8
Orange Cherry Software (1989). $59.00.
IIGS (3.5")
LA/6
Content: *Spelling of 42 common words*

Consists of six scenes based on travel, clothing, or the outdoors. In each, a child types a word, such as "train," to make a train appear in a scene. Letter hints are provided if needed. Also has a word-scramble activity where child sees a mixed-up word and uses the mouse to unscramble the letters. Combines great graphics and speech with poor design.

TALKING TEXTWRITER
Rating: **75** Ages: 3–9
Scholastic Software, Inc. (1986). $159.95.
Apple* (128K), IIGS, IBM
LA/3,4,5,6,7,9 CP/4 OT/4
Content: *Exploration of written language*

A large-print word processor that says letters, words, or sentences as they are typed. Requires Echo speech synthesizer ($50 extra). Stories can be saved and printed. Requires adult setup. Comes on two disks. Apple IIGS and IBM versions do not require the Echo.

TALKING VERBS
Rating: **80** Ages: 2½–up
Laureate Learning Systems (1987). $130.00.
Apple (128K), IBM
LA/5,8 CL/1,2
Content: *Language development*

Three activities include picture matching, picture identification, and interactive communication. During interactive communication child presses a verb picture (such as crying or talking) on an overlay for the PowerPad or Touch-Window (one is required) to hear the word (Echo synthesizer required) and see animation. Forty verbs and key-phrase words included. Adult setup required. Recommended for nonverbal children.

TED BEAR GAMES
Rating: **83** Ages: 4–up
Baudville (1985). $29.95.
Apple*, C64, Atari, Mac
OT/1 CL/1,2
Content: *Memory practice*

Contains three card games on one disk: Concentration, Old Maid, and Go Fish. Child uses mouse, joystick, arrow keys, or Koala Pad to move cards. Three difficulty levels offer a range in content. Well designed. Offers good level of child-control. Up to three players can play against the computer.

TEDDY AND IGGY
Rating: **78** Ages: 6–8
Sunburst Communications, Inc. (1987). $65.00.
Apple*, IBM
CL/1 OT/1
Content: *Sequential memory practice*

Three activities on one disk. Child must re-create order in which Teddy made his bed (recalling which color of sheet went on first), recall sequence in which several objects were flashed, or recall the order in which several boxes were opened. Uses keyboard, Muppet keyboard, or TouchWindow. Requires reading, color monitor.

TEDDY BEAR-RELS OF FUN
Rating: **56** Ages: 5–up
DLM (1987). $39.95.
Apple*, C64
CP/1,4 LA/3 SP/2
Content: *Creating pictures, graphics, and stories*

Child uses spacebar, RETURN, and arrow keys to create scenes with teddy bears. Includes over 200 pictures, backgrounds, and props that a child can arrange on the screen. Rather complex menus (a child must type CONTROL-C to go back) are better-suited to older children. Work can be saved or printed in color.

TEDDY BEARS COUNTING FUN
Rating: **32** Ages: 3–6
Micro-Learningware (1981). $30.00.
Apple
NB/3
Content: *Counting skills*

Presents nine scenes in which child counts bears (a random number from 1–9 appears), "reads" poem, and inputs number. Blocky graphics are hard to understand. Very limited content. Not recommended.

TEDDY'S PLAYGROUND
Rating: **80** Ages: 5–9
Sunburst Communications, Inc. (1985). $65.00.
Apple
CL/2
Content: *Practice with color and shape attributes*

Child uses joystick, mouse, or arrow keys to move freely around three main areas of Teddy's playground to arrange pieces by shape, color, or shading. Includes supplementary materials. Similar in design to *Gertrude's Secrets*. Color monitor required.

TELLING TIME
Rating: **34** Ages: 5–9
Orange Cherry Software (1984). $39.00.
Apple*, C64, TRS 80, IBM, Atari, PET
TI/9
Content: *Clock practice*

Provides practice with clock-reading skills. Multiple-choice questions are presented concerning the time shown on a rough clock. Child enters answer by typing letter. Reading required. A better clock-reading program is in *Learning About Numbers* by C&C Software.

THIS LAND IS YOUR LAND
Rating: **80** Ages: 3–up
Merit Software (1986). $14.95.
Apple* (128K), IBM, C64
CP/1,4 SP/4
Content: Coloring pictures

A coloring program with 30 blank scenes of the United States on one disk. Child moves cursor with mouse, joystick, or arrow keys to fill in sections of a picture with 1 of 16 available colors. Prints in color. Mouse and color monitor recommended. Very easy to use. Prints picture with calendar.

THREE LITTLE PIGS, THE
Rating: **89** Ages: 5–up
William K. Bradford Publishing (1989). $75.00.
Apple*, IBM
LA/3,8,9 NB/3 SP/1,2,4,7 CP/1,4
Content: *Creative writing*

Contains three parts: (1) Story Teller—child reads through the story. (2) Story Maker—child creates own story scenes, using animated objects or own text. (3) Activities—contains story-starters, a tool hunt, a house-building activity, and a puppet kit. Mouse recommended. Good design, graphics. No sound. Can print in color with an Imagewriter II printer. Some reading required.

THREE LITTLE PIGS, THE: EXPLORE-A-STORY PLUS
Rating: **83** Ages: 5–12
William K. Bradford Publishing (1992). $75.00.
Mac (color, HD)
LA/3,9 CP/4 SP/7
Content: *Exploring stories, creating printed products*

A flannel-board-like activity that allows child to navigate throughout a story by clicking on arrow icons. Items in each scene can be easily rearranged, replicated, or deleted; new ones can be added. Text can be added at any point, simply by typing. Text windows can also be added. No sound is used. Contains several activities such as story-starters, matching, or building. Clever design. Work can be printed or saved. Young children will need help with file access/saving.

TIGER'S TALES
Rating: **80** Ages: 5–7
Sunburst Communications, Inc. (1986). $65.00.
Apple
LA/5,8
Content: *Reading & vocabulary comprehension*

Five interactive stories in which child selects pictures related to the story. Includes a picture/word matching activity. Large, easy-to-read letters. Supplementary worksheets and activities are included. Can be used with Muppet Learning Keys. Reading required.

TIME MASTER
Rating: **25** Ages: 5–7
Micro Power & Light Company (1980). $29.95.
Apple
TI/9
Content: *Clock practice*

Child must be able to read "set hand to half past seven" to use this program. Hands are moved with arrow keys. Choices are hours, half hours, quarter hours, minutes, or start and set the clock. Poor design. Not recommended.

TIME & MONEY ADVENTURES OF LOLLIPOP DRAGON
Rating: **61** Ages: 6–up
SVE, Inc. (1992). $29.95.
Apple, IBM*
TI/9 NB/3
Content: *Practice with units of time and money*

Two disks, each with three straightforward activities. On the money disk child counts change and types answer, determines the greater amount of two sets of coins, and types answers to money subtraction word problems. The time disk contains activities in which child uses arrow keys to set the hands of a clock to the hour (illustrated with a number line) or minute (to the closest 5 minutes). Enables adults to keep limited records. Useful for straight practice. Menu requires reading.

TOMMY THE TIME TURTLE
Rating: **38** Ages: 5–9
Heartsoft Software (1991). $39.95.
IBM*, Apple
TI/9
Content: *Reading conventional clocks*

Consists of five, slow-moving sequential tutorials on how to read the hands of a clock for the following time units: one hour, 1/2 hour, 15 minutes, 5 minutes, and 1 minute. After the tutorial, ten multiple-choice problems are given. Rigid structure allows little child-control; menu requires reading. No adult management options. Not recommended.

TONK IN THE LAND OF BUDDY-BOTS
Rating: **56** Ages: 4–8
Mindscape, Inc. (1984). $29.95.
Apple*, C64, IBM
SP/1,5,7 OT/1
Content: *Problem solving*

Child uses joystick or arrow keys to move "Tonk" through a 65-screen landscape filled with robot parts, sky holes, and enemy soldiers. Along the way, Tonk can stop to play one of six games on memory, matching, and spatial relations. Joystick use is optional.

TOUCH & WRITE
Rating: **81** Ages: 5–7
Sunburst Communications, Inc. (1986). $75.00.
Apple
LA/4,5
Content: *Printing practice*

Child touches screen (TouchWindow required) to make letters. Contains 4 stroke lessons and 19 letter lessons, based on the Palmer Manuscript style. Allows flexibility in design. Child can practice strokes, letters, or words. Work can be printed. D'Nealian version available.

TOUCH AND MATCH
Rating: **65** Ages: 3–6
Edmark Corporation (1986). $29.95.
Apple
CL/2,4
Content: *Classification*

Child needs only touch the screen (TouchWindow required) to identify identical, associated, or different pictures among four that are shown. Menu requires reading. Some setup required by adult. Clear but limited graphics. Easy for a child to use.

TOUCH AND SEE
Rating: **61** Ages: 4–7
Edmark Corporation (1986). $39.95.
Apple
OT/1 CL/2
Content: *Memory skills*

A memory game in which children match 6 pairs of shapes, letters, pictures, or words hidden in 12 boxes. Timer shows time limit. Child touches screen to make matches. TouchWindow required. Written menus.

TOYBOX
Rating: **56** Ages: 1–up
S.D.L. (1986). $10.00.
C64*, Apple (128K), IBM
TI/1 CP/1,2,4
Content: *Exploration of the computer*

Each keystroke puts a different shape, color, or special effect on the screen in a random position. Effects accumulate on the screen, creating a composition that can be saved on the disk. Extremely easy to use.

TREASURE MOUNTAIN
Rating: **82** Ages: 5–9
The Learning Company (1991). $37.99.
IBM (CGA, VGA)
CL/1,2,3 LA/6,7,10 NB/7 SE/1 OT/1
Content: *Reading, thinking, math, and science skills*

Child uses mouse or arrows to move through a maze of mountain paths. Along the way, hidden items can be discovered by following clues and carefully answering one of more than 350 multiple-choice word problems. Game and question difficulty increase as more treasures are discovered. Records can be saved, allowing many children to maintain ongoing games. Effectively combines good content with an engaging format.

TREEHOUSE, THE
Rating: **92** Ages: 6–10
Broderbund Software (1991). $69.95.
IBM* (VGA, hard disk, speech device), Apple, Mac
LA/8,9 TI/9 NB/1,3,5,7,8 CL/2 CP/1-4 SP/6,7 SE/1
Content: *Math skills, language, animals, music, and more*

Child uses mouse (recommended), joystick, or arrows to explore a treehouse containing toys, animals, and six activities. Clicking on an object causes action or launches an activity. Primary activities: sentence order, music creation and pitch, money and base ten, animal facts, and habitats. Includes 25 other entertaining objects. Clear speech (separate device required) and graphics. Excellent design is rich in content and holds children's interest. Uses copy protection puzzle every fifth startup.

TUK GOES TO TOWN
Rating: **41** Ages: 4–8
Mindscape, Inc. (1984). $19.95.
Apple
LA/4,5,11 SP/4
Content: *Spelling and vocabulary development*

Seven games on one disk designed to give practice in unscrambling or matching shapes or letters. Games take place in an interactive story that features Tuk on his way to town. Some instructions are confusing; menu requires reading. Games are not appropriate for younger children.

VOCABULARY SKILLBUILDER
Rating: **82** Ages: 3–6
Edmark Corporation (1990). $189.95.
Apple
LA/1
Content: *Vocabulary development*

By touching screen (if used with TouchWindow) or selecting picture with arrow keys or single switch, child can hear name of a familiar object in a clear voice (Echo speech synthesizer required). The series contains 600 words on 8 disks, covering such common topics as body parts, animals, food, toys, people, and school. Content can be altered with the Edmark LessonMaker.

WEBSTER'S NUMBERS
Rating: **67** Ages: 4–8
Compton's New Media (1983). $39.95.
Apple*, C64
NB/3,4 SP/1,2,4
Content: *Basic math concepts*

Four games: (1) Ribbet—child moves through maze to catch numerals 1–9 in order. (2) Balloon Race—child steers balloons to numerals to match a set. (3) Shape Up—child moves shapes to match a model. (4) Pushover—child unscrambles number blocks. Joystick or paddles required.

WHAT MAKES A DINOSAUR SORE?
Rating: **89** Ages: 5–10
D. C. Heath & Company (1988). $75.00.
Apple
LA/2,3,5,9 CP/4 SP/4,7
Content: *Language experience*

Children use mouse, Koala Pad, joystick, or arrow keys to select or move objects, backgrounds, words, or characters of a story. They can also add their own words. Resulting stories can be saved and printed in color. Includes four copies of the storybook. Good design. Fun to use. Part of the Explore-a-Story Series.

WHAT'S IN A FRAME?
Rating: **81** Ages: 5–11
Sunburst Communications, Inc. (1987). $65.00.
Apple*, IBM
OT/1 CL/1,4
Content: *Memory practice by context clues*

Two activities: (1) Did You See This?—frame shows several objects for a timed period. Then one object at a time is shown, and child must decide if it was in the original frame. (2) What's in a Frame?—from given objects, child marks ones that were in an original frame. Keeps records. TouchWindow optional.

WHAT'S NEXT
Rating: **74** Ages: 3–14
Strawberry Hill Software (1985). $55.00.
Apple*, C64
SE/1,2 CL/1,2 NB/1
Content: *Sequencing skills*

Child sees a series of shapes or objects and must select which piece comes next in the series. There are eight levels of difficulty. Includes a "U-Design-It" feature that allows the design of custom patterns that can be saved. Offers a variety of sequences and objects.

WHEELS ON THE BUS
Rating: **75** Ages: 3–6
UCLA Intervention Program (1988). $25.00.
Apple
TI/1,2
Content: *Cause and effect*

Child touches pictures on the PowerPad or TouchWindow that illustrate the song "Wheels on the Bus," hears verses of the song (Echo speech synthesizer required), and sees them animated on the screen. Easy to use. Designed for use in special education settings. UCLA sells 37 similar programs covering different themes.

WHERE DID MY TOOTHBRUSH GO?
Rating: **89** Ages: 5–10
D. C. Heath & Company (1988). $75.00.
Apple
LA/2,3,5,9 CP/4 SP/4,7
Content: *Language experience*

Children use mouse, Koala Pad, joystick, or arrow keys to select or move objects, backgrounds, words, or characters of a story. Children can also add their own words. Resulting stories can be saved and printed in color. Includes four copies of the storybook. Good design. Fun to use.

WHICH NUMBER IS MISSING?
Rating: **59** Ages: 5–6
MicroED, Inc. (1984). $7.99.
Apple*, IBM, C64
NB/2
Content: *Number order*

A simple program in which a child types a number to complete a random three-number sequence between 0 and 99. Correct answers cause a truck to drive across the screen. Keeps track of number of problems missed and the time spent on each problem. Limited content. Dry presentation. Menu requires reading.

WHOLE NEIGHBORHOOD, THE
Rating: **69** Ages: 6–13
Queue, Inc. (1991). $49.95.
Apple*, IBM
CP/4 LA/3,6,9 SP/2,5
Content: *A graphics program with text-writing feature*

Child selects from a variety of clip art (e.g., stores, workers, people, objects) to create town scenes that can be saved or printed in color. Words can be added and spoken on Echo synthesizer (optional). Our five-year-olds liked the graphics but needed help to use the program. Pages can be printed in seven sizes.

WINKER'S WORLD OF NUMBERS
Rating: **82** Ages: 6–up
Wings for Learning (1989). $65.00.
Apple
NB/3,8 OT/1
Content: *Patterns in sequences of numbers*

As Winker moves around a grid, numbers appear in the boxes of the grid, revealing parts of a number pattern. Child can stop Winker when ready to identify the pattern by guessing numbers in other boxes. Three difficulty levels offer a range of challenges. Picture menu is easy to use.

WINKER'S WORLD OF PATTERNS
Rating: **82** Ages: 4–up
Wings for Learning (1989). $65.00.
Apple
CL/2 SE/3 NB/4 LA/4 OT/1
Content: *Inferring and recognizing patterns*

As Winker moves around a grid, colors, numbers, or letters appear in the boxes of a grid, revealing parts of a pattern. Child can stop Winker when ready to identify the pattern by guessing the colors, numbers, or letters in other boxes. Three difficulty levels. Picture menu is easy to use. Color monitor required.

WOOLLY BOUNCE
Rating: **83** Ages: 5–7
MECC (1991). $59.00.
Apple
CL/1 TI/2,3 SE/1
Content: *Force and motion*

A simple physics simulation involving influences on bouncing balls. The first activity allows free experimentation with variables of height, type of ball (e.g., bowling or tennis), and floor surface. In the second activity, a child must match a bounce by selecting the correct variables. Contains 15 kinds of balls and 2 types of surfaces. Graphs of information can be printed. Keeps records for each child.

WOOLLY'S GARDEN
Rating: **84** Ages: 5–7
MECC (1992). $59.00.
Apple
CL/4,5 SE/1 OT/5
Content: *Knowledge of plants, regulation of variables*

Clever simulation program puts child in the role of a gardener, with control over 12 kinds of seeds and three variables—amounts of water and sun (little, some, lots) and temperature (cool, warm, hot). Once a seed is selected, the correct combination of variables must be selected for the plant to produce the maximum amount of harvest (shown in bushels). Management options allow adult record keeping for up to 75 students, as well as control over the difficulty of each activity.

WORD FACTORY
Rating: **22** Ages: 3–6
Island Software (1983). $25.00.
Apple
CL/2
Content: *Word discrimination*

Child uses < or > keys to discriminate between matching words. Leaves child with little control. Limited in content. Poor design. Not recommended.

WORD MUNCHERS
Rating: **80** Ages: 6–10
MECC (1985). $29.95.
Apple*, IBM, Mac
LA/6,7
Content: *Vowel-sound discrimination*

An enjoyable game in which child earns points by using arrow keys or joystick to move a creature around a grid of 30 word boxes in search of words containing a specific vowel sound (e.g., the vowel sound in "moon"). Game gets progressively harder. Teacher options allow control over which of 20 sounds are presented. A good way to practice with vowel sounds.

WORD PROCESSING FOR KIDS
Rating: **78** Ages: 3–5
PC-SIG, Mobius Corporation (1984).
Shareware or see *KidWare 2*.
IBM
LA/3
Content: *Word processing*

A simple 20- or 40-column word processor. A picture menu makes it easy for a child to create stories quickly. Text has a somewhat blocky appearance. Does not have speech capacity. Stories can be saved or printed. See *KidWare 2* for pricing information. Contact Sydney Nolte, 13838 Peyton Drive, Dallas, TX for Shareware information.

WORDS
Rating: **61** Ages: 4–6
Lawrence Hall of Science (1984). $34.95.
Apple
LA/4,5,8
Content: *Letter discrimination, word experiences*

Presents three games, two on letter recognition and one on simple sentence structure. Kindergarten children were able to use the Funny Letters and Words activity. Activities effectively focus on the attributes of letters. Best for 5-year-olds. Some reading used, e.g., "Press RETURN."

WORDS & CONCEPTS
Rating: **80** Ages: 3–adult
Laureate Learning Systems (1987). $200.00.
Apple
LA/5,8 CL/1,2,4
Content: *Vocabulary training*

Shows three objects—using a Touch-Window, single switch, or number keys, a child responds to questions asked through an Echo speech synthesizer. Provides practice identifying, categorizing, associating, and discriminating 40 common nouns. Designed for children or adults who need training in vocabulary. Teacher setup allows much control over presentation. Keeps records.

WORDS & CONCEPTS II
Rating: **80** Ages: 3–adult
Laureate Learning Systems (1988). $200.00.
Apple
LA/5,8 CL/1,2,4
Content: *Vocabulary training*

Same as *Words & Concepts*. Provides 40 additional nouns.

WORDS & CONCEPTS III
Rating: **80** Ages: 3–adult
Laureate Learning Systems (1988). $200.00.
Apple
LA/5,8 CL/1,2,4
Content: *Vocabulary training*

Same as *Words & Concepts* and *Words & Concepts II*. Provides 40 additional nouns.

WORKING WITH DAYS AND MONTHS
Rating: **63** Ages: 5–8
S.R.A. (1985). $49.95.
Apple
TI/9
Content: *Order of the days and months*

Four activities on one disk. Child uses arrows and RETURN to select a day or month and see an associated picture (e.g., a kite for May), or to complete a short, three-day or three-month sequence. Record-keeping system keeps track of progress. Menu requires reading but is easy to use. Dry presentation. Includes worksheets.

WORKING WITH NUMBERS
Rating: **63** Ages: 5–8
S.R.A. (1985). $49.95.
Apple
NB/3,4
Content: *Counting and numerical order*

Four activities on one disk. Child uses arrows and RETURN to select a number and see an associated set, or to complete a short, three-number sequence. Some record keeping. Menu requires reading but is easy to use. Includes worksheets. Dry presentation.

WORKING WITH THE ALPHABET
Rating: **63** Ages: 5–8
S.R.A. (1985). $49.95.
Apple
LA/4 CL/2
Content: *Alphabetical order and letter recognition*

Four activities on one disk. Child uses arrows and RETURN to select a letter and see an associated picture (e.g., a ball for "b"), or to complete a short, three-letter alphabetical sequence. Can be set for upper/lower case. Some record keeping. Menu requires reading but is easy to use. Includes worksheets.

WORKING WITH TIME
Rating: **63** Ages: 5–8
S.R.A. (1985). $49.95.
Apple
TI/9
Content: *Matching clock faces*

Three activities on one disk. Child uses arrows and RETURN to freely move the hands of a clock or to set hands to match the time shown on a digital or analog clock. Structured lessons have four steps: demonstration, practice, testing, and worksheets (included). Keeps record of progress. Menu requires reading. Dry presentation.

WRITE ON: PRIMARY LEVEL
Rating: **Not rated** Ages: 5–8
Humanities Software (1988). $79.00 per disk.
Apple*, IBM, Mac
LA/9 CP/4
Content: *Writing*

Consists of 26 data disks compatible with any of 16 major word-processing programs (e.g., AppleWorks, Magic Slate, Microsoft Word). Disks consist of story-starters, rhyming activities, cloze activities, poems, journals, forms, sentence-starters, chants, couplets, and songs. Items typed by child can be saved or printed.

WRITING TO READ 2.0
Rating: **45** Ages: 5–6
EduQuest (1982). $791.00.
IBM
LA/4,5,6
Content: *Reading skills*

A 14-disk computer-based curriculum designed to teach reading skills through writing, using phonetic spelling. Computers are only one component. Each disk covers three words. Child hears letter or word and must type. Speech synthesizer required. Available in Spanish. Ratings apply only to software.

WUNDER BOOK
Rating: **80** Ages: 3–10
Software Excitement! (1991). Shareware.
IBM (VGA)
CL/2,4 LA/4,5
Content: *Matching, letter recognition, language practice*

Child uses mouse or keyboard to (1) select identical objects in a set of four, (2) select objects that are different, (3) type in the name of an object (e.g., "cat") with clues, and (4) type in the name of a pictured object without clues. The last two activities can be done in French, German, Spanish, or English for children/adults learning a language. Forty objects are available. Design promotes child-control.

YOUNG MATH
Rating: **75** Ages: 4–8
Stone & Associates (1986). $39.95.
IBM*, Atari ST
NB/3,4,7,8 SE/2 SP/1
Content: *Addition & subtraction equations, patterns*

Four well-designed activities: (1) Equations—child enters answer for equation to see answer animated. (2) Construction—child sees equation and types answer to build a scene. (3) Freight Depot—child uses arrow keys or joystick to load answers onto truck. (4) Patterns—child selects next pattern element. Adult menu offers control over content.

ZUG'S ADVENTURES ON ECO-ISLAND
Rating: **59** Ages: 4–9
First Byte, Inc. (1991). $39.95.
Mac, IBM* (VGA, hard disk, speechcard, mouse)
SP/7 OT/5
Content: *Ecology facts*

Child uses mouse or arrow keys to move through an island, finding trash and listening to characters who share ecology tips along the way. When trash is correctly sorted in recycling bins, points are earned. Some reading required. Younger children (ages 4-5) will need help. Some of the cartoonish graphics are confusing, especially at first. Formerly called *Eco-Saurus*.

ZUG'S DINOSAUR WORLD
Rating: **84** Ages: 4–9
Davidson and Associates, Inc. (1992). $34.95.
IBM (Sound card, hard disk, 3MB)
LA/8,9 CL/2 CP/1 OT/1
Content: *Dinosaur facts, memory, story elements*

Four activities: (1) Color-A-Saurus—a 10-page animated coloring book with 16 colors. Pictures can be printed. (2) DinoMatch—a 10-card concentration game using talking dinosaur cards. For one or two players; three levels of difficulty. (3) Excavation—guessing the type of dinosaur fossil hidden behind 8 or 12 cards, revealed one at a time. (4) Prehistory—creating silly short stories by selecting icons to finish given sentences. Speech is used throughout. Enjoyable program. Contains a range of dinosaur information.

ZUG'S RACE THROUGH SPACE
Rating: 77 Ages: 5–12
Davidson and Associates, Inc. (1992)
$34.95.
IBM (Sound card, hard disk, 5MB)
OT/6
Content: *Solar system facts*

A fun, computerized, comic-book-styled activity with talking, animated characters. Story involves two dinosaurs who deliver hamburgers to space stations around the solar system, racing against a mean competitor. Faster deliveries score more points. To fill each order, a child must use a map of the solar system or talk to various characters, such as the space police, to learn basic space facts. Each space station also contains specific planet facts and a digitized photo. Keeps ongoing scores. Voice is somewhat unnatural.

Appendix 2

Software Publishers

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FAX 713-781-3550

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Wichita KS 67220
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316-683-6056

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(Formerly Britannica Software)
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Carlsbad CA 92009
619-929-2500

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FAX 416-250-6540

DR PEET'S INTEREST-DRIVEN LEARNING
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800-633-8623

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815-965-2464

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800-426-9400

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Tucson AZ 85705
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FAX 602-322-0363
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WINGS FOR LEARNING
See Sunburst Communications

Appendix 3

Software Programs by Concept Area

This appendix lists the titles and release dates of software programs for children, classified by concept area. The newest programs are listed first. The programs included were reviewed in this or previous editions of the Buyer's Guide. *The following categories are included: classification, creative projects, language and literacy, number and math, seriation, space, time, science, music and movement, social studies, other topics.*

CLASSIFICATION

Treehouse, The	1993
Busytown	1993
Mickey's Colors & Shapes	1993
Graph Club, The	1993
Zurk's Learning Safari	1993
Playroom, The (update)	1993
Thinkin' Things Collection 1	1993
Match-On-A-Mac 2.0	1992
Lexia I, II, III	1992
Snoopy's Game Club	1992
Zug's Dinosaur World	1992
Emerging Literacy Program	1991
Animated Memory	1991
Amy's First Primer 2.2	1991
Match Maker (Beginning)	1991
Logic Blocks	1991
McGee at the Fun Fair	1991
Kinder Critters	1991
Treasure Mountain	1991
Woolly Bounce	1991
Wunder Book	1991
Early Concepts Skillbuilder Series	1990
Animated Shapes	1990
Katie's Farm	1990
Picture Chompers	1990
Berenstain Bears Learn About Counting, The	1990
Curious George Goes Shopping	1989
CCC Instructional System	1989
Curious George in Outer Space	1989
Fun With Colors	1989
Mathosaurus Level K	1989
McGee	1989
Perception, Inc.	1989
Preschool Pack	1989
Parquetry and Pictures	1989
Same and Different	1989
Talking School Bus	1989
Talking Colors and Shapes	1989
Stars & Planets	1989
Winker's World of Patterns	1989
Talking Animals Activity Set	1989
Cotton's First Files	1988
Easy Street	1988
Concentrate!	1988
Patterns	1988
Learning Sight Words	1988
Kindermath II	1988
Learning Shapes	1988
Perfect Fit	1988
Learning the Alphabet	1988
Microzine Jr. 1 (Sept./Oct.'88)	1988
Talking ABC's	1988
Silly Letters & Numbers	1988
Words & Concepts III	1988
Words & Concepts II	1988
Integrated Learning System	1987
Early & Advanced Switch Games	1987
Fun With Memory	1987
Math and Me	1987
KidsTime I (and PC)	1987
Math Concepts Level P	1987
Now You See It, Now You Don't	1987
Mixed-Up Mother Goose	1987
Talking Verbs	1987
Teddy and Iggy	1987
Reading and Me	1987
Words & Concepts	1987
What's in a Frame?	1987
Talking Nouns II	1987
Talking Nouns I	1987
Adventures of Dobot, The	1986
Inside Outside Shapes	1986
Early Skills	1986
Costume Ball, The	1986
Dr. Peet's Talk/Writer	1986
Garden, The	1986
Kindercomp Golden Edition	1986
Memory Building Blocks	1986
Rabbit Scanner, The	1986
Muppet Word Book	1986
Muppetville	1986
Shape Starship	1986
Reading Starters	1986
Reading Helpers	1986
Touch and Match	1986
Touch and See	1986
Alphabet Academy, The	1985
Comparison Kitchen	1985
Counting Critters 1.0	1985
Color Find	1985

Ollie Letters It ... 1985
Observation and Classification ... 1985
Ollie Hears and Remembers ... 1985
Lion's Workshop ... 1985
Ollie Hears and Sequences ... 1985
Kinder Koncepts Reading ... 1985
Ollie Matches It ... 1985
Ollie Compares It ... 1985
Ollie Numbers It ... 1985
Ollie Finds It! ... 1985
Ollie Remembers It ... 1985
Ollie Sequences It! ... 1985
Peter's Growing Patterns ... 1985
Ollie Remembers Numbers! ... 1985
Sesame Street Learning Library 2 ... 1985
Sesame Street Learning Library 1 ... 1985
Shutterbug's Patterns ... 1985
Sesame Street Grover's Animal Adventures ... 1985
Same or Different ... 1985
What's Next ... 1985
Teddy's Playground ... 1985
Working With the Alphabet ... 1985
Ted Bear Games ... 1985
SocPix ... 1985
Colors and Shapes ... 1984
Dinosaurs ... 1984
Getting Ready to Read and Add ... 1984
Early Games ... 1984
Patterns and Sequence ... 1984
One Banana More ... 1984
Preschool IQ Builder II ... 1984
Learn the Alphabet ... 1984
Talk About a Walk ... 1984
Stickybear Town Builder ... 1984
Sesame Street Big Bird's Special Delivery ... 1984
Sesame Street Ernie's Magic Shapes ... 1984
Size and Logic ... 1984
Shape & Color Rodeo ... 1984
Shapes & Patterns ... 1984
Odd One Out ... 1983
Kids on Keys ... 1983
Word Factory ... 1983
Gertrude's Secrets ... 1982
Early Elementary I ... 1982
Country Combo ... 1982
Preschool IQ Builder I ... 1982
Letter Games ... 1982
Kindercomp ... 1982
Introduction to Counting ... 1981
Moptown Parade ... 1981
Alphabetization & Letter Recognition ... 1980

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Magic Bear's Masterpieces ... 1993
Storybook Weaver ... 1993
Treehouse, The ... 1993
Creative Writer ... 1993
Kid's Studio ... 1993
Playroom, The (update) ... 1993
Thinkin' Things Collection 1 ... 1993
Easy Color Paint ... 1992
Kid Works 2 ... 1992
Kid Cuts ... 1992
Fairy Tale Factory ... 1992
Little People Farm Creativity Kit ... 1992
Little People Main Street Creativity Kit ... 1992
Princess and the Pea: Explore-a-Story Plus ... 1992
Rosie the Counting Rabbit: Explore-a-Story Plus ... 1992
Three Little Pigs: Explore-a-Story Plus ... 1992
Zug's Dinosaur World ... 1992
Mario Paint ... 1992
Emerging Literacy Program ... 1991
Mickey & Minnie's Fun Time Print Kit ... 1991
Logic Blocks ... 1991
Make-A-Book ... 1991
KidWare 2 Learning Center ... 1991
Kid Pix ... 1991
Kid Works ... 1991
School Mom ... 1991
Whole Neighborhood, The ... 1991
Berenstain Bears Fun With Colors, The ... 1991
Electronic Easel ... 1990
Electronic Builder ... 1990
Human Being Machine, The ... 1990
Delta Drawing Today ... 1990
Big Book Maker ... 1990
Color 'n' Canvas ... 1990
I Love You in the Sky, Butterfly ... 1990
Mural Maker ... 1990
Music Maker ... 1990
Let's Go To Hannah's House ... 1990
Learn About: Plants ... 1990
Farm, The ... 1990
Talking Classroom ... 1990
Robot Writ- Plus ... 1990
Super GS Award Maker ... 1990
ESL Writer ... 1989
Fun With Colors ... 1989
Fun With Drawing ... 1989
Looney Tunes Print Kit ... 1989
Learn About: Animals ... 1989
Monsters & Make-Believe ... 1989
Kidsword ... 1989
Measure Works ... 1989
Milliken Storyteller, The ... 1989
Princess and the Pea, The ... 1989
Playroom, The ... 1989
Print Power ... 1989
Sesame Street First Writer ... 1989
Stars & Planets ... 1989
Three Little Pigs, The ... 1989
Stone Soup ... 1989
Talking Animals Activity Set ... 1989
Dinosaur Days Plus ... 1988
Children's Writing & Publishing Center ... 1988
Brand New View, A ... 1988
Great Leap, A ... 1988
Dinosaurs Are Forever ... 1988
Cotton's First Files ... 1988
Holidays & Seasons ... 1988
Bald-Headed Chicken, The ... 1988
Electric Company: Picture Place ... 1988
FirstWriter ... 1988
Patterns ... 1988
My Grand Piano ... 1988
Just Around the Block ... 1988
Read, Write, & Publish 1 ... 1988
Primary Editor Plus ... 1988
Learning Shapes ... 1988
Magic Melody Box ... 1988
Microzine Jr. 1 (Sept/Oct '88) ... 1988
Not Too Messy, Not Too Neat ... 1988
Sleepy Brown Cow, The ... 1988
Write On: Primary Level ... 1988
What Makes a Dinosaur Sore? ... 1988
Sesame Street Print Kit ... 1988
Where Did My Toothbrush Go? ... 1988
Rosie the Counting Rabbit ... 1988
Cotton Tales ... 1987
Integrated Learning System ... 1987
Early & Advanced Switch Games ... 1987
Designasaurus ... 1987
Print Shop, The ... 1987
KidsTime I (and PC) ... 1987

Keytalk 1987
My Words 1987
Sesame Street Crayon: Opposites Attract 1987
Sesame Street Crayon: Letters for You 1987
Sesame Street Crayon: Numbers Count 1987
Teddy Bear-rels of Fun 1987
ABC's 1986
Color Me 1986
Facemaker Golden Edition 1986
Extrateletactograph, The 1986
Dr. Peet's Talk/Writer 1986
Fun on the Farm 1986
Kindercomp Golden Edition 1986
Paint With Words 1986
Toybox 1986
This Land Is Your Land 1986
Talking Textwriter 1986
Peter's Growing Patterns 1985
Stickybear Printer 1985
Surrounding Patterns 1985
Early Games 1984
Kidwriter 1984
Puzzle Master 1984
Rainbow Painter 1984
Magic Slate II 1984
Kermit's Electronic Storymaker 1984
Picture Perfect 1984
Music 1984
Notable Phantom, The 1984
Mask Parade 1984
Stickers 1984
Magic Crayon 1983
Koala Pad Graphics Exhibitor 1983
Country Combo 1982
Kindercomp 1982

LANGUAGE AND LITERACY

Storybook Weaver 1993
Treehouse, The 1993
Busytown 1993
Bailey's Book House 1993
Donald's Alphabet Chase 1993
Children's Treasury of Stories, Nursery Rhymes, and Songs 1993
Follow the Reader 1993
Zurk's Learning Safari 1993
New Kid on the Block, The 1993
Kid Keys 1993
Reader Rabbit 3 1993
My Own Stories 1993
Creative Writer 1993
Kid's Studio 1993
A to Zap 1993
Tale of Peter Rabbit, The 1993
Playroom, The (update) 1993
Easy Color Paint 1992
Dino Speller 1992
Match-On-A-Mac 2.0 1992
Kid Works 2 1992
Reader Rabbit 2 1992
Bravo! Books: A Beautiful Feast for a Big King Cat 1992
Fairy Tale Factory 1992
Key Words: First Keyboarding Skills 1992
Lexia I, II, III 1992
Little People Farm Creativity Kit 1992
Princess and the Pea: Explore-a-Story Plus 1992
Rosie the Counting Rabbit: Explore-a-Story Plus 1992
Snoopy's Game Club 1992
Three Little Pigs: Explore-a-Story Plus 1992
Zug's Dinosaur World 1992
Emerging Literacy Program 1991
Dragon Tales 1991
Daffy Duck, P.I. 1991
Amy's First Primer 2.2 1991
Alphabet Fun: Learning the Alphabet 1991
Alphabet Fun: Big and Little Letters 1991
Mickey & Minnie's Fun Time Print Kit 1991
My House: Language Activities of Daily Living 1991
McGee at the Fun Fair 1991
Make-A-Book 1991
KidWare 2 Learning Center 1991
Kid Pix 1991
Kid Works 1991
Kinder Critters 1991
ReadingMaze 1991
Treasure Mountain 1991
School Mom 1991
Whole Neighborhood, The 1991
Berenstain Bears Learn About Letters, The 1991
Wunder Book 1991
Story Tailor: We Bake Gingerbread Folks 1991
Annabel's Dream of Ancient Egypt 1991
Early Concepts Skillbuilder Series 1990
Donald's Alphabet Chase 1990
Alphabet for Everyone 1990
Big Book Maker 1990
Animated Alphabet 1990
Color 'n' Canvas 1990
I Love You in the Sky, Butterfly 1990
Katie's Farm 1990
Mickey's ABC's 1990
Let's Go To Hannah's House 1990
Mickey's Crossword Puzzle Maker 1990
Memory Lane 2.0 1990
Playwrite 1990
Learn About: Plants 1990
Letters, Pictures & Words 1990
Talking Classroom 1990
Robot Writer Plus 1990
Sentence Master Level 1 1990
Vocabulary Skillbuilder Series 1990
Talking First Words 1990
Reading Fun: Vowel Sounds 1990
Brandon's Bigbox 1989
ESL Writer 1989
Big Red Hat, The 1989
Consonant Capers 1989
CCC Instructional System 1989
Clue in on Phonics 1989
First Verbs 1989
Fish Dish, The 1989
Jen the Hen 1989
Mickey's Magic Reader 1989
Looney Tunes Print Kit 1989
Learn About: Animals 1989
Monsters & Make-Believe 1989
Kidsword 1989
Milliken Storyteller, The 1989
Princess and the Pea, The 1989
Playroom, The 1989
Preschool Pack 1989
Print Power 1989
Talking Speller 1989
Talking First Reader 1989
Sesame Street First Writer 1989
Talking Reading Railroad 1989
Winker's World of Patterns 1989
Three Little Pigs, The 1989
Talking First Writer 1989
Talking Alpha Chimp 1989

Stone Soup	1989
Dinosaur Days Plus	1988
Children's Writing & Publishing Center	1988
Brand New View, A	1988
Great Leap, A	1988
1-2-3 Sequence Me	1988
Electric Company: Bagasaurus	1988
Jack and the Beanstalk	1988
Flodd, the Bad Guy	1988
Easy Street	1988
Concentrate!	1988
Bald-Headed Chicken, The	1988
Electric Company: Picture Place	1988
Electric Company: Roll-A-Word	1988
FirstWriter	1988
Reading Comprehension: Level I	1988
Learning Sight Words	1988
Just Around the Block	1988
Read, Write, & Publish I	1988
Primary Editor Plus	1988
Muppet Slate	1988
New Talking Stickybear Alphabet, The	1988
Phonics Plus	1988
Learning the Alphabet	1988
Not Too Messy, Not Too Neat	1988
Learning Letters	1988
Talking ABC's	1988
Sleepy Brown Cow, The	1988
Silly Letters & Numbers	1988
Words & Concepts III	1988
Write On: Primary Level	1988
What Makes a Dinosaur Sore?	1988
Words & Concepts II	1988
Sesame Street Print Kit	1988
Where Did My Toothbrush Go?	1988
Rosie the Counting Rabbit	1988
Cotton Tales	1987
First "R": Kindergarten, The	1987
Fun With Letters and Words	1987
Bird's Eye View	1987
Integrated Learning System	1987
Bremen Town Musicians	1987
Fun With Memory	1987
Language Experience Recorder	1987
KidsTime I (and PC)	1987
Once Upon a Time..., Volume I	1987
Read-a-Logo	1987
Keytalk	1987
Learning the Alphabet	1987
My Words	1987
Mount Murdoch	1987
Sound Ideas: Word Attack	1987
Sight Word Spelling	1987
Talking Verbs	1987
Reading and Me	1987
Words & Concepts	1987
Rumpelstiltskin	1987
Teddy Bear-rels of Fun	1987
Talking Nouns II	1987
Talking Nouns I	1987
Beginning Reading Skills	1986
Bank Street Writer III, The	1986
Inside Outside Opposites	1986
Animal Alphabet and Other Things	1986
Color Me	1986
Alphabet Recognition	1986
Adventures of Jimmy Jumper, The	1986
Facemaker Golden Edition	1986
Extrateletactograph, The	1986
Dr. Peet's Talk/Writer	1986
Pictures, Letters, and Sounds	1986
My Puzzles and Alphabet	1986
Kindercomp Golden Edition	1986
Kieran	1986
Muppet Word Book	1986
Phonics Prime Time: Initial Consonants	1986
Paint With Words	1986
Sound Ideas: Vowels	1986
Reading Starters	1986
Sound Ideas: Consonants	1986
Reading Helpers	1986
Talking Textwriter	1986
Touch & Write	1986
Tiger's Tales	1985
Exploratory Play	1985
Fun From A to Z	1985
Alice in Wonderland	1985
Jack and the Beanstalk	1985
Alphabet Express	1985
Action/Music	1985
Bouncy Bee Learns Letters 1.0	1985
Bouncy Bee Learns Words 1.0	1985
Alphabet Academy, The	1985
First Letter Fun	1985
Jr. Typer	1985
Great Gonzo in WordRider, The	1985
Ollie Letters It	1985
Ollie Begins It	1985
Kinder Koncepts Reading	1985
Ollie Matches It	1985
Ollie Compares It	1985
Magic String, The	1985
Representational Play	1985
Reading I	1985
Reading Fun: Beginning Consonants	1985
Working With the Alphabet	1985
Stickybear Typing	1985
Word Munchers	1985
Spelling Bee, The	1985
Alphabet Sounds	1984
Alphabet Circus	1984
ABC-123 Activities for Learning	1984
Easy as ABC	1984
Getting Ready to Read and Add	1984
Charlie Brown's ABC's	1984
Computergarten	1984
Astro's ABC's	1984
Cat 'n Mouse	1984
Early Games	1984
One Banana More	1984
Kid's Stuff	1984
Kidwriter	1984
Race the Clock	1984
Magic Slate II	1984
Micro-LADS	1984
Preschool IQ Builder II	1984
Learn the Alphabet	1984
Kermit's Electronic Storymaker	1984
Picture Perfect	1984
Muppets On Stage	1984
Letters and First Words	1984
Word Processing for Kids	1984
Talk About a Walk	1984
Stickybear Reading	1984
Words	1984
Sesame Street Letter-Go-Round	1984
Alphabet Arcade, The	1983
Body Awareness	1983
Alphabet Zoo	1983
Creature Creator	1983
Hey Diddle Diddle	1983
Developing Language Skills	1983
Letters and Words	1983
Letter Recognition	1983
Kids on Keys	1983
My Letters, Numbers, and Words	1983
Spellicopter	1983
Hodge Podge	1982

Alphaget ... 1982
Preschool IQ Builder I ... 1982
Letter Games ... 1982
Kindercomp ... 1982
Reading Machine, The ... 1982
Stickybear ABC ... 1982
Spelling and Reading Primer ... 1982
Writing To Read 2.0 ... 1982
Early Elementary II ... 1981
Alphabetization & Letter Recognition ... 1980

NUMBER AND MATH

KidsMath ... 1994
Math Rabbit ... 1993
NumberMaze ... 1993
Treehouse, The ... 1993
Busytown ... 1993
Treasure MathStorm! ... 1993
Stickybear's Math Town ... 1993
Graph Club, The ... 1993
Zurk's Learning Safari ... 1993
DinoPark Tycoon ... 1993
Math Ace ... 1993
Money Challenge ... 1993
Playroom, The (update) ... 1993
Match-On-A-Mac 2.0 ... 1992
Bodymapper ... 1992
Clock Works ... 1992
Mental Math Games ... 1992
Exploring Math With Manipulatives—Level I ... 1992
Emerging Literacy Program ... 1991
Base Ten Blocks ... 1991
Animated Math ... 1991
Amy's First Primer 2.2 ... 1991
Math Blaster Plus ... 1991
KidWare 2 Learning Center ... 1991
Treasure Mountain ... 1991
School Mom ... 1991
Hop To It! ... 1990
I Can Count the Petals of a Flower ... 1990
I Love You in the Sky, Butterfly ... 1990
Mickey's Runaway Zoo: Fun With Numbers ... 1990
Mickey's123's ... 1990
Let's Go To Hannah's House ... 1990
Berenstain Bears Learn About Counting, The ... 1990
Brandon's Bigbox ... 1989
Exploring Measurement, Time, & Money ... 1989
Bozons' Quest ... 1989
CCC Instructional System ... 1989
Mathosaurus Level K ... 1989
Learning Numbers ... 1989
Measure Works ... 1989
Princess and the Pea, The ... 1989
Playroom, The ... 1989
Preschool Pack ... 1989
Talking Dinosaurs I ... 1989
Talking School Bus ... 1989
Stars & Planets ... 1989
Winker's World of Patterns ... 1989
Three Little Pigs, The ... 1989
Talking Money ... 1989
Winker's World of Numbers ... 1989
Talking Alpha Chimp ... 1989
Stone Soup ... 1989
Talking Animals Activity Set ... 1989
Stone Soup ... 1989
Chutes and Ladders ... 1988
Balancing Bear ... 1988
Easy Street ... 1988
Kindermath II ... 1988
Mathematics Level A ... 1988
Little People Bowling Alley ... 1988
Silly Letters & Numbers ... 1988
Simple Addition ... 1988
Rosie the Counting Rabbit ... 1988
Talking Numbers ... 1988
School Bus Driver ... 1988
Integrated Learning System ... 1987
I Can Count ... 1987
Fun With Numbers ... 1987
Early Math ... 1987
Boars Tell Time, The ... 1987
Fun With Memory ... 1987
Math and Me ... 1987
Quarter Mile, The ... 1987
KidsTime I (and PC) ... 1987
Math Concepts Level P ... 1987
Money Works ... 1987
Stickybear Numbers ... 1987
Sight Word Spelling ... 1987
Arithmetic Critters ... 1986
Coin Works ... 1986
Clock Works ... 1986
Counting and Ordering ... 1986
Kindercomp Golden Edition ... 1986
Kieran ... 1986
Muppetville ... 1986
Path-Tactics ... 1986
Young Math ... 1986
Fish Scales ... 1985
Bike Hike ... 1985
Conservation and Counting ... 1985
Hobo's Luck ... 1985
Comparison Kitchen ... 1985
Charlie Brown's 1-2-3's ... 1985
Counting Critters I.0 ... 1985
Kinder Koncepts MATH ... 1985
Number Sea Hunt ... 1985
Ollie Numbers It ... 1985
Peter's Growing Patterns ... 1985
Math Sequences ... 1985
Sesame Street Learning Library 1 ... 1985
What's Next ... 1985
Working With Numbers ... 1985
Diskovery Adding Machine ... 1984
Getting Ready to Read and Add ... 1984
Diskovery Take Away Zoo ... 1984
Early Games ... 1984
Estimation ... 1984
One Banana More ... 1984
Numbers ... 1984
Math Magic ... 1984
Number Farm ... 1984
Learn to Add ... 1984
Muppets On Stage ... 1984
Stickybear Math ... 1984
Sesame Street Astro-Grover ... 1984
Counters ... 1983
Developing Language Skills ... 1983
Monkey Math ... 1983
Learning About Numbers ... 1983
Math Maze ... 1983
Knowing Numbers ... 1983
Webster's Numbers ... 1983
Early Elementary I ... 1982
Bumble Games ... 1982
Milk Bottles ... 1982
Early Elementary II ... 1981
Introduction to Counting ... 1981
Teddy Bears Counting Fun ... 1981

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Treehouse, The ... 1993
Zurk's Learning Safari ... 1993
Playroom, The (update) ... 1993
Thinkin' Things Collection 1 ... 1993
Logic Blocks ... 1991
Treasure Mountain ... 1991
Woolly Bounce ... 1991

Music Maker 1990
New Talking Stickybear Opposites, The 1990
Learn About: Plants 1990
Berenstain Bears Learn About Counting, The 1990
Exploring Measurement, Time, & Money 1989
Curious George in Outer Space 1989
Learn About: Animals 1989
Perception, Inc. 1989
Stars & Planets 1989
Winker's World of Patterns 1989
Big and Small 1988
1-2-3 Sequence Me 1988
Patterns 1988
My Grand Piano 1988
Magic Melody Box 1988
Math and Me 1987
KidsTime I (and PC) 1987
Math Concepts Level P 1987
Simon Says 1987
Adventures of Dobot, The 1986
Inside Outside Opposites 1986
City Country Opposites 1986
Counting and Ordering 1986
Early Skills 1986
Shape Starship 1986
Young Math 1986
Fish Scales 1985
Peter's Growing Patterns 1985
Math Sequences 1985
What's Next 1985
Colors and Shapes 1984
Patterns and Sequence 1984
Kid's Stuff 1984
Music 1984
Notable Phantom, The 1984
Size and Logic 1984
Shapes & Patterns 1984
Introduction to Counting 1981
Moptown Parade 1981

SPACE

NumberMaze 1993
Magic Bear's Masterpieces 1993
Storybook Weaver 1993
Treehouse, The 1993
Busytown 1993
Bailey's Book House 1993
Goofy's Railway Express 1993
Backyard, The 1993
Thinkin' Things Collection 1 1993
Easy Color Paint 1992
Match-On-A-Mac 2.0 1992
Mental Rotation 1992
Bodymapper 1992
JPuzzle 1.1 1992
Little People Farm Creativity Kit 1992
Little People Main Street Creativity Kit 1992
Princess and the Pea: Explore-a-Story Plus 1992
Rosie the Counting Rabbit: Explore-a-Story Plus 1992
Snoopy's Game Club 1992
Three Little Pigs: Explore-a-Story Plus 1992
Exploring Math With Manipulatives—Level 1 1992
Emerging Literacy Program 1991
Base Ten Blocks 1991
Amy's First Primer 2.2 1991
Mickey's Jigsaw Puzzles 1991
Jungle Safari 1991
Logic Blocks 1991
KidWare 2 Learning Center 1991
Kid Pix 1991
ReadingMaze 1991
Whole Neighborhood, The 1991
Zug's Adventures on Eco-Isla 1991
Electronic Easel 1990
Fun Flyer 1990
Electronic Builder 1990
Human Being Machine, The 1990
Delta Drawing Today 1990
Animated Shapes 1990
Goofy's Railway Express 1990
Color 'n' Canvas 1990
I Love You in the Sky, Butterfly 1990
Mickey's Colors & Shapes 1990
New Talking Stickybear Opposites, The 1990
Learn About: Plants 1990
Farm, The 1990
Talking Classroom 1990
Robot Writer Plus 1990
Berenstain Bears Junior Jigsaw, The 1990
Curious George Visits the Library 1989
Exploring Measurement, Time, & Money 1989
Bozons' Quest 1989
CCC Instructional System 1989
Fun With Colors 1989
Fun With Drawing 1989
Joystick Trainer 1989
Learn About: Animals 1989
New Talking Stickybear Shapes, The 1989
McGee 1989
Monsters & Make-Believe 1989
Measure Works 1989
Princess and the Pea, The 1989
Playroom, The 1989
Parquetry and Pictures 1989
Talking School Bus 1989
Talking Colors and Shapes 1989
Three Little Pigs, The 1989
Stone Soup 1989
Stone Soup 1989
Brand New View, A 1988
Great Leap, A 1988
Dinosaurs Are Forever 1988
Firehouse Rescue 1988
I Can Remember 1988
Holidays & Seasons 1988
Easy Street 1988
Bald-Headed Chicken, The 1988
Just Around the Block 1988
Read, Write, & Publish 1 1988
Kindermath II 1988
Knowing Directions 1988
Learning Shapes 1988
Little People Bowling Alley 1988
Perfect Fit 1988
Learning Directions 1988
Microzine Jr. 1 (Sept/Oct.'88) 1988
Not Too Messy, Not Too Neat 1988
Sleepy Brown Cow, The 1988
What Makes a Dinosaur Sore? 1988
Where Did My Toothbrush Go? 1988
Rosie the Counting Rabbit 1988
School Bus Driver 1988
Bird's Eye View 1987
Early & Advanced Switch Games 1987
Designasaurus 1987
Bremen Town Musicians 1987
Math Concepts Level P 1987
Now You See It, Now You Don't 1987
Mixed-Up Mother Goose 1987
Sesame Street Crayon: Opposites Attract 1987

Sesame Street Crayon: Letters for You ... 1987
Sesame Street Crayon: Numbers Count ... 1987
Rumpelstiltskin ... 1987
Teddy Bear-rels of Fun ... 1987
ABC's ... 1986
Adventures of Dobot, The ... 1986
Inside Outside Opposites ... 1986
Inside Outside Shapes ... 1986
Adventures of Jimmy Jumper, The 1986
Facemaker Golden Edition ... 1986
Costume Ball, The ... 1986
Fun on the Farm ... 1986
Garden, The ... 1986
My Puzzles and Alphabet ... 1986
Kieran ... 1986
Reading Starters ... 1986
Young Math ... 1986
This Land Is Your Land ... 1986
Exploratory Play ... 1985
Dr. Seuss Fix-Up the Mix-Up Puzzler ... 1985
Hobo's Luck ... 1985
Comparison Kitchen ... 1985
Great Gonzo in WordRider, The ... 1985
Peter's Growing Patterns ... 1985
Sesame Street Learning Library 2 ... 1985
Sesame Street Pals Around Town ... 1985
Sesame Street Ernie's Big Splash ... 1985
Representational Play ... 1985
Surrounding Patterns ... 1985
Fun With Directions ... 1984
Peanuts Maze Marathon ... 1984
Puzzle Master ... 1984
Rainbow Painter ... 1984
Learn the Alphabet ... 1984
Peanuts Picture Puzzlers ... 1984
Mask Parade ... 1984
Tonk in the Land of Buddy-Bots ... 1984
Talk About a Walk ... 1984
Stickybear Town Builder ... 1984
Stickers ... 1984
Body Awareness ... 1983
Grandma's House ... 1983
Developing Language Skills ... 1983
Magic Crayon ... 1983
Koala Pad Graphics Exhibitor ... 1983
Stickybear Shapes ... 1983
Webster's Numbers ... 1983
Spellicopter ... 1983
Gertrude's Secrets ... 1982
Puss in Boot ... 1982
Early Elementary II ... 1981

TIME

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Treehouse, The ... 1993
Goofy's Railway Express ... 1993
Playroom, The (update) ... 1993
Thinkin' Things Collection 1 ... 1993
TimeLiner ... 1992
Little People Farm Creativity Kit ... 1992
Snoopy's Game Club ... 1992
Daffy Duck, P.I. ... 1991
Animated Memory ... 1991
Math Blaster Plus ... 1991
McGee at the Fun Fair ... 1991
KidWare 2 Learning Center ... 1991
Kid Pix ... 1991
School Mom ... 1991
Woolly Bounce ... 1991
Fun Flyer ... 1990
Chip 'n Dale ... 1990
Goofy's Railway Express ... 1990
Professor Al's Sequencing Lab ... 1990
Katie's Farm ... 1990
Talking Classroom ... 1990
Exploring Measurement, Time, & Money ... 1989
Bozons' Quest ... 1989
Playroom, The ... 1989
Readiness Fun ... 1989
Scanning Fun ... 1989
Simple Cause and Effect ... 1989
Talking Alpha Chimp ... 1989
Caveman Clockwork ... 1988
Firehouse Rescue ... 1988
1-2-3 Sequence Me ... 1988
Easy Street ... 1988
Picture Parade ... 1988
Little People Bowling Alley ... 1988
Talking Clock ... 1988
Wheels on the Bus ... 1988
Run Rabbit Run ... 1988
School Bus Driver ... 1988
Creature Chorus ... 1987
Early & Advanced Switch Games ... 1987
Designasaurus ... 1987
Boars Tell Time, The ... 1987
Children's Switch Progressions ... 1987
Coin Works ... 1986
City Country Opposites ... 1986
Clock Works ... 1986
Garden, The ... 1986
Kieran ... 1986
Rabbit Scanner, The ... 1986
Toybox ... 1986
Alice in Wonderland ... 1985
Jack and the Beanstalk ... 1985
Great Gonzo in WordRider, The ... 1985
Reading I ... 1985
Working With Days and Months ... 1985
Working With Time ... 1985
Ducks Ahoy! ... 1984
Fun With Directions ... 1984
Estimation ... 1984
Peanuts Maze Marathon ... 1984
Kermit's Electronic Storymaker ... 1984
Stickybear Town Builder ... 1984
Telling Time ... 1984
Sesame Street Letter-Go-Round ... 1984
Creature Creator ... 1983
Learning About Numbers ... 1983
Time Master ... 1980

SCIENCE

Zoo Keeper ... 1993
Kid CAD ... 1993
Zurk's Learning Safari ... 1993
Backyard, The ... 1993
Gizmos & Gadgets ... 1993
Spelunx and the Caves of Mr. Seudo ... 1993
Learn About Insects ... 1992
Our Earth ... 1992
Bodymapper ... 1992
Field Trip Into the Sea, A ... 1992
Human Being Machine, The ... 1990
Learn About: Plants ... 1990
Learn About: Animals ... 1989
Stars & Planets ... 1989

MUSIC AND MOVEMENT

Music Ace ... 1994
Backyard, The ... 1993
Kid Keys ... 1993
Thinkin' Things Collection 1 ... 1993
MetroGnomes' Music ... 1992
Mario Paint ... 1992
Bremen Town Musicians ... 1987
KidsTime I (and PC) ... 1987
Action/Music ... 1985

Music 1984
Notable Phantom, The 1984
Creature Creator 1983

SOCIAL STUDIES

DinoPark Tycoon 1993
TimeLiner 1992

OTHER TOPICS

KidsMath 1994
Morgan's Trivia Machine 1994
Math Rabbit 1993
Kid Keys 1993
EZ Play 1992
Zug's Dinosaur World 1992
Zug's Race Through Space 1992
Animated Memory 1991
Match Maker (Beginning) 1991
Jungle Safari 1991
Kinder Critters 1991
Treasure Mountain 1991
Zug's Adventures on Eco-Island 1991
Grady Profile—Portfolio-based Assessment 1991
Early-On 1990
Edmark LessonMaker 1990
Memory Lane 2.0 1990
Brandon's Bigbox 1989
ESL Writer 1989
CCC Instructional System 1989
Preschool Pack 1989
Sesame Street First Writer 1989
Winker's World of Patterns 1989
Winker's World of Numbers 1989
Children's Writing & Publishing Center 1988
I Can Remember 1988
Concentrate! 1988
Primary Editor Plus 1988
Muppet Slate 1988
Microzine Jr. 1 (Sept/Oct '88) 1988
Learning Letters 1988
Silly Letters & Numbers 1988
Integrated Learning System 1987
Home Row 1987
Fun With Memory 1987
Language Experience Recorder 1987
KidsTime I (and PC) 1987
Now You See It, Now You Don't 1987
Mixed-Up Mother Goose 1987
Simon Says 1987
Sight Word Spelling 1987
Teddy and Iggy 1987
What's in a Frame? 1987
Adventures of Dot, The 1986
Facemaker Golden Edition 1986
Costume Ball, The 1986
Garden, The 1986
Memory Building Blocks 1986
Muppetville 1986
Touch and See 1986
Talking Textwriter 1986
Animal Hotel 1985
Bike Hike 1985
Animal Photo Fun 1985
Jr. Typer 1985
Ollie Hears and Remembers 1985
Ollie Hears and Sequences 1985
Kinder Koncepts Reading 1985
Ollie Remembers It 1985
Ollie Sequences It! 1985
Ollie Remembers Numbers! 1985
Shutterbug's Pictures 1985
Stickybear Printer 1985
Ted Bear Games 1985
Computergarten 1984
IEP Generator Version 5.01 1984
Race the Clock 1984
Magic Slate II 1984
Tonk in the Land of Buddy-Bots 1984
Kids on Keys 1983

Appendix 4

Glossary

Definitions are given here for terms used in the Buyer's Guide *that may be unfamiliar to the reader.*

Apple IIe Card—A circuit board containing the components of an Apple IIe computer. Allows some Macintosh computers to run Apple II software.

BASIC (Beginners All-purpose Symbolic Instruction Code)—A language often used with microcomputers that employs word-like commands rather than numerical codes. A relatively easy language to learn.

branching—The capacity of a program to adjust its level of challenge to match the child's performance, an important component of computer-managed instruction (CMI). For example, if the child performs a task poorly, the program automatically presents a simpler task.

button—A spot on the screen that a user may click on with a mouse to activate a command. No typing is necessary.

CD-ROM (compact disk-read only memory)—A device that stores a vast amount of information (such as an encyclopedia series) on a compact disk. The user may scan the disk for pertinent information.

chip—A tiny silicon surface containing a computer circuit.

clicking—Pressing and releasing the mouse button.

computer literacy—Familiarity with the parts of a microcomputer and some measure of programming skill.

computer-managed instruction (CMI)—A capacity of a computer program that allows a teacher to set up individualized activities. This often includes the ability to sort, print, and automatically update performance records of children who use the program. See *branching*.

Concept Keyboard—A vinyl-covered keypad that can be customized for different types of computer applications. Two Concept Keyboards can be plugged into the same computer, enabling two children to work together on the same program. Useful for special education settings. Produced by Hach Associates, it costs $495.

Contact Keyboard—An adaptive keyboard device for the Apple IIGS computer. Offers ten large keys and snaps into place over the Apple IIGS keyboard. Designed for use in special education settings.

copy protection puzzle—A method used by some software producers to prevent illegal copying of their programs. Consists of a simple puzzle (e.g., "Find the third word on page 6 of the user's manual"), the answer to which is found in the original program documentation. May complicate programs operated by children.

cursor—A symbol, such as a dash or box, that marks on the screen where the next keystroke will occur.

digitized voice or sound—Speech or other sounds recorded in digital form on a computer.

disk—See *floppy disk*.

disk drive—The mechanism into which the disk or diskette is inserted. Makes the disk rotate as on a record player.

divergent—See *open-ended*.

DOS—An acronym for disk operating sytem, a program that controls a computer's basic functions, such as reading disks or creating files.

download—Retrieving online information, files, or programs from a distant computer via a network of telephone lines.

dragging—Placing the cursor on an on-screen object, clicking the mouse button, and moving the mouse. As you move the mouse, the object on the screen also moves.

drill and practice—A program design that provides repeated practice with specific skills or concepts. Frequently involves answer checking, performance feedback, or chances to review missed problems.

E-mail—Electronic mail. Messages sent from one computer to another over a network or telephone lines.

embedded reinforcements—A program's pictures or sounds that relate to and work with the content, rather than being merely entertaining or attention-getting.

file server—The computer that contains programs used by other computers in a *network*.

floppy disk—A vinyl disk, coated with magnetic material, on which computer programs can be recorded for storage. Also called *diskette*.

free RAM—The amount of a computer's main memory available for programs once the operating system and accessories (e.g., mouse drivers, sound drivers) are loaded. Almost always less than the computer's total RAM.

freeware—See *shareware*.

graphics—The pictorial part of a program presented on the screen. Often animated and in color.

hard disk—In a computer, a nonremovable device on which information (files) can be stored. Also called a fixed disk. Hard (or fixed) disk storage is similar to floppy disk storage but provides much greater storage capacity.

hardware—The physical equipment that makes up a computer system, such as the monitor, computer, keyboard, printer.

Hypercard—A software application for the Macintosh computer that allows user with a minimal knowledge of computer programming to create custom programs.

icon—A picture or symbol that stands for a word or concept. Often used in menus to make a program usable by nonreaders.

Imagewriter—A printer designed for Apple computers. The Imagewriter II can print in color if it has a special ribbon.

joystick—A computer attachment. Moving the joystick handle up, down, left, or right makes an object or cursor move in corresponding directions on the screen. A button on the joystick may also be used to stop or start action or pick up an object.

K—An abbreviation for Kilo, or thousand, usually referring to a computer's memory size in bytes. A 640K computer, for example, has 640 thousand bytes of memory. A byte can be roughly translated as one alphabet character.

key experiences—The learning objectives of the High/Scope Curriculum. They are guideposts for planning classroom activities and evaluating learning progress.

Kidz Mouse—A computer mouse designed for children's use. Shaped like a mouse (a real mouse, not the computer device), it can be programmed for right- or left-handed children. For IBM or compatibles.

Koala Pad—A book-sized, touch-sensitive pad that allows information to be entered into the computer by drawing with a stylus or finger on the pad. Mostly used for drawing.

Linkway—A multimedia authoring system for IBM computers.

light pen—A pen-shaped attachment sensitive to the light of the computer's TV display. Can be used to "draw" on the screen or to point to and select objects or areas on the screen.

load—To copy a program's instructions from a disk or tape into the computer's memory.

LOGO—A computer language that uses a combination of simple instructions and graphics. Commonly used to introduce programming procedures to children.

MB—megabyte, one million bytes. Used in referring to the amount of RAM or space on hard disks and floppy disks and to the size of computer files.

memory—An ability of a computer system to store information for later retrieval.

menu—A list of a computer program's choices displayed on the screen.

microcomputer—A desktop-sized computer with many of the capabilities of larger computers.

monitor—The video display device attached to most microcomputers. Like a television screen without a channel tuner.

mouse—A handheld computer attachment whose movement (left, right, up, or down) on a desk moves objects or a cursor in corresponding directions on the screen. A button on the mouse may also be used to stop or start an action or pick up an object.

multimedia—Computer programs that include multiple information media: pictures, text, sound, even video clips.

Muppet Learning Keys—A separate keyboard that plugs into a joystick port. Contains numbers 0–9 in left-to-right order and letters in alphabetical order, plus eight color keys. It requires specially designed software. Available from Sunburst Communications.

network—A system that links computers together. Networked computers can share printers and other equipment.

network version—Software designed to run on a network of inter-connected computers. Network versions at a program are often more costly than stand-alone versions since one network version can have many users.

online—A term describing information contained in a computer and available to be called up by the user. Usually refers to information stored in a distant computer and retrieved via a network or over telephone lines.

open-ended—An aspect of some computer programs, such as word processing, programming, and drawing programs, that allowing many different results to be produced.

password—A word or code that allows a child to use parts of a computer program or gives access to his or her stored files.

peripheral—An attachment to the computer, such as a keyboard, monitor, printer, mouse, or voice synthesizer.

PowerPad—A large (12" by 12") touch-sensitive graphics tablet that plugs into the computer. Often used with picture templates that can be laid over its surface, allowing children to press pictures to enter answers into the computer. Produced by Dunamis, Inc., it costs about $200. Similar pad called *WonderWorker* produced by DIL International.

program—An organized set of instructions, written in a computer language, that makes the computer perform a specified task. Programs are referred to as "software."

programming—The process of giving the computer instructions. Several programming activities exist for children, e.g., for drawing—"Delta Drawing" and "EZ Logo"; for programming the movements of a face or object—"Facemaker," "Creature Creator."

pull-down menu—A visual method of making on-screen selections. A mouse is used to move a pointer to an icon or word. Clicking the mouse then causes a related list of options to appear.

RAM—Random Access Memory, the computer's main memory, which is activated when the computer is turned on but which loses its contents when the computer is powered off.

scan mode—A method of entering information into a computer by following a cursor that constantly moves among possible responses. When the cursor highlights a desired response, one key (such as the spacebar) must be pressed.

shareware—Software that you are encouraged to copy and give to others at no cost and on a noncommercial basis. A message is included in the program, with the address of the producer, asking for a fee if the user finds the program of value. Also called *freeware*.

simulation—A program that models a real-life situation, such as the operation of a lemonade stand, the flying of an airplane, or the exploration of a volcano. Simulations are frequently designed to allow children to practice skills or concepts in a life-like situation.

single switch—A computer attachment. Has a single button or switch that can be used to enter responses into the computer. Commonly used in special education settings. Produced by Developmental Equipment, Inc.

software—The information that controls the computer. This information is usually stored on an electromagnetic medium such as a disk or tape. See *program*.

spell-checker program—A program that checks the spelling of word processor stories. Some include such features as a built-in thesaurus, a list of optional spellings, or the ability to add words to the dictionary.

Sound Blaster or Sound-Blaster–compatible sound card—sound cards made by Creative Labs, Inc., or designed to be compatible with them.

sound card—A device allowing digitized sounds to be sent to headphones or speakers and sound input from a microphone or other source to be digitized and recorded in the computer. The sound card can be either inside or outside the computer. See also *Sound Blaster*.

Sound Source, The—A computer attachment for IBM-compatible computers that produces digitized music or speech. Produced by Walt Disney Computer Software, Inc., this attachment is designed especially for Disney software titles. It plugs into the printer port and requires a battery.

System 7 (6.x, etc.)—A name given to various versions of the Apple Macintosh's operating system. Higher numbers are later versions. Also called the Finder.

text-to-speech—software and hardware (e.g., a sound card) that allows a computer to synthesize speech sounds from text.

TouchWindow—A touch-sensitive transparent screen from Edmark Corporation that fits over a computer monitor, allowing information to be entered into the computer by touching screen images with a finger or stylus. It requires specially designed software.

tutorial—A computer program, or part thereof, demonstrating a process or skill, such as matching objects one-to-one, with provisions for children to model or try the same process or skill on their own.

VGA, SVGA—Two (of many) video standards or specifications for computer monitors. Monitors differ in the number of dots (pixels) they can display and the number of colors or shades of grey they can display.

video card (or adapter)—The part of the computer, often a plug-in card, that controls what is displayed on the computer's monitor. Video cards must match the display requirements of software and support the capabilities of the monitor. A program, for example, that provides VGA color images, requires a video card and a monitor capable of VGA color.

Windows—Software produced by Microsoft, Inc., giving IBM-compatible computers a graphical user interface that uses picture icons to represent the programs.

word-processing program—A program that enables a child to use the computer to write, as with a typewriter. Word-processing programs usually have additional features, such as ability to edit, save, and recall written material; ability to reformat written material; and ability to choose print style.

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